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Botanical

DESCRIPTIVE NOTES ON PAPUAN PLANTS,

BY

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VI.

[1884]

FROM 1875 to 1877 the writer of the present notes issued five small parts of a publication on "Papuan Plants," for which issue the material became directly available to him and this largely through the kindness of the Missionaries in the south-eastern parts of New Guinea. Since then the work was discontinued, not only because the access of actually new additional material proving scanty, but also because Dr. E. Bceeri, who was personally engaged in Papuan Explorations, had commenced in 1877 his learned and splendidly illustrated "Malesia," in which work the Papuan plants, gathered mainly by this distinguished Naturalist, were to appear along with numerous others, obtained by him in the Sunda-Islands. Although now six parts of the "Malesia" have appeared, the last in 1884, only a very limited number of natural orders became as yet investigated, which is not surprising, when the vastness of the material, accruing from Dr. Bceeri's long itinerations, is considered. Under these circumstances it seemed not advisable, to postpone Australian researches concerning the Flora of New Guinea any longer, merely on account of similar

engagements of the Italian Phytographer, especially also as all our material here came from the south-eastern portion of the great island, whereas Beccari's Papuan collections were accumulated in the north-western part, except some of those, which from Signor D'Albertis's second dashing expedition passed into his hands. An additional reason for resuming, with ministerial sanction, the Victorian publication on Papuan plants is given by the recent despatch of an Expedition under Capt. Everill through the Geographic Society of Anstralia and under the auspices of the Governments of New South Wales and Victoria, to the Aird-River and the mountainous tracts of country beyond,—rich results also for phytology being expected from that expedition, to be rendered known from Australia. Moreover the almost simultaneous start of Mr. H. O. Forbes, to ascend the Owen Stanley's Ranges from Port Moresby, a feat long urged by the writer of the present essay, holds out further great hopes of adding very extensively also to our knowledge of the Papuan Flora, and that from regions, in which the endemic characteristics of the vegetation must culminate. Also from this expedition, though planned by scientific societies of Britain, we in Anstralia may expect to benefit in our own Papuan researches, half of the expenditure of Mr. Forbes's enterprise being defrayed by our Geographic Society here from the Governments fund under its control. Thus it becomes really requisite now, to collect the scattered notes on the New Guinea Flora, which appeared since the discontinuance of the "Papuan Plants" in various local periodicals from researches of the writer of this work; and it seems also advisable, to add notes on those records of Dr. Beccari's New Guinean plants, which did not appear in the Malesia, but in different monographic essays mostly by other authors. Through the means, now here adopted, the furtherance of elucidations of the New Guinean vegetation will become facilitated, as well in Florence as in Melbourne and indeed elsewhere also, more particularly so as likely through

methodic explorations under the aid of all the Australian Colonial Governments the resources of the great Papuan Island, in which we here are so prominently interested, will become early and extensively revealed.

Melbourne, June 1885.

NYMPHÆACEÆ.

BARCLAYA MOTTLEYI.

J. Hooker in transact. Linn. Soc. xxiii. t. 21.

Fly-River ; D'Albertis.

Noted by Dr. Beccari in Signor D'Albertis's "New Guinea," ii. 396.

MENISPERMEÆ.

STEPHANIA HERNANDIFOLIA.

Walpers, repertor. bot. syst. i. 96.

Near Port Moresby ; Rev. W. G. Lawes.

MONIMIACEÆ.

MOLLINEDIA HUEGELIANA.

Tulasne in Annal. des scienc. nat. sér. quatr. iii. 45.

Lorne-Range ; Rev. J. Chalmers.

Fruit-bearing branchlets seen, apparently belonging to this species. A second species occurs on Owen Stanley's Range, but is known only from very imperfect specimens.

LAURINEÆ.

MASSOIA AROMATICA.

Beccari in D'Albertis, New Guinea ii. 398.

On the Fly-River and in various other localities.

The spicy bark of this tree is much sought by the Malays and may possess medicinal virtue.

CRUCIFERÆ.

BRASSICA TIMORIANA.

Sinapis Timoriana, De Candolle prodr. i. 219 ; De Lessert, icon. ii. 88 ; Decaisne in

Nouv. annal. du mus. iii. 425 ; Miquel, fl. Ind. Batav. i. pars alt. p. 94.

Near the Astrolabe-Range ; E. G. Edelfelt.

PITTOSPOREÆ.

PITTOSPORUM FERRUGINEUM.

Aiton, hort. Kew, sec. edit. ii. 27.

On Astrolabe-Range ; W. Armit.

First noted as Papuan in the "Vict. Naturalist," April 1885.

DROSERACEÆ.

DROSERA INDICA.

Linné, spec. plantar. 282.

Jervis-Island ; Rev. W. G. Lawes.

FLACOURTIACEÆ.

PANGIUM EDULE.

Reinwardt in Blume's Catal. van Gewassen in Lands plantentuin te Buitenzorg
p. 112.

Fly-River ; D'Albertis. Near the Finisterre-Mountains ; Mikluho-Maclay.

VIOLACEÆ.

HYBANTHUS ENNEASPERMUS.

F. v. M., fragm. phytogr. Austr. x. 81.

Jervis-Island ; Rev. James Chalmers.

POLYGALACEÆ.

POLYGALA LEPTALEA.

De Candolle, prodr. i. 325.

Murray-Island ; Rev. J. Chalmers.

GERANIACEÆ.

OXALIS CORNICULATA.

Linné, spec. plant. 435.

South Cape ; Rev. J. Chalmers.

STERCULIACEÆ.

PTEROCYMBIUM JAVANICUM.

R. Brown in Horsfield's plant. Javan. rar. p. 219, t. xlv.
Fly-River ; D'Albertis, according to Beccari, l. c. p. 396.

TILIACEÆ.

ARISTOTELIA PAPUANA.

F. v. M. in Wing's S. Sc. Record, Aug. 1881.
Near the Astrolabe-Range ; Rev. James Chalmers.

MALVACEÆ.

URENA SINUATA.

Linné, sp. pl. 692.

Fly-River ; D'Albertis.

DIPTEROCARPEÆ.

VATICA PAPUANA.

Dyer in Trimen's journal of Botany 1878, p. 99.
Mount Arfak ; Beccari.

EUPHORBIACEÆ.

BREYNIA CERNUA.

J. Mueller in De Cand. prodr. xv. part. ii. 439.
Kudipo and Aniwarupu near Kerepunu ; Rev. James Chalmers.

ALEURITES TRILOBA.

R. and G. Forster, char. gen. 111, t. 56.
Fly-River ; D'Albertis.

MELIACEÆ.

MELIA AZEDARACH.

Linné, spec. plant. 384.

Near Port Moresby ; Rev. W. G. Lawes.

AGLAIA ZIPPELII.

Miquel, Annal. mus. bot. Lugd. iv. 55.
New Guinea, with *A. litoralis* (Miq. v. 4) ; Zippelius.

SAPINDACEÆ.

APHANIA CUSPIDATA.

Radlkofer in D'Albertis's New Guinea ii. 396.

Fly-River ; D'Albertis.

CUPANIA BRACHYPHYLLA.

Arytera brachyphylla, Radlkofer l. c. p. 396.

HARPULLIA ANGUSTIFOLIA.

Radlkofer, l. c. p. 396.

AMENTACEÆ.

QUERCUS D'ALBERTISII.

F. v. M. in Vict. Naturalist, Dec. 1884.

Fly-River ; D'Albertis.

QUERCUS GULLIVERI.

F. v. M. in Vict. Naturalist, Febr. 1885.

Astrolabe-Range ; Edelfelt.

CASUARINEÆ.

CASUARINA NODIFLORA.

G. Forster in Murray syst. veget. p. 840 (1784).

Astrolabe-Range, common ; G. Belford.

STACKHOUSIACEÆ.

STACKHOUSIA VIMINEA.

Smith in Rees cycl. xxxiii. (1819).

Jervis-Island ; Rev. James Chalmers. This locality (about 9° 55' S.) has been regarded as Papuan, being nearer to New Guinea than to any part of Continental Australia.

AMARANTACEÆ.

GOMPHRENA GLOBOSA.

Linné, spec. plant. 224.

South-Eastern part of New Guinea ; Armit.

POLYGONACEÆ.

MUEHLENBECKIA PLATYCLADA.

F. v. M. in Hooker's bot. magazine, t. 5382.

South-Eastern New Guinea ; Rev. James Chalmers.

COMBRETACEÆ.

GYROCARPUS AMERICANUS.

N. Jacquin, select. stirp. Amer. hist. 282, t. 178.

Aroa-River ; W. Armit.

QUISQUALIS INDICA.

Linné, spec. plant, ed. sec. p. 556.

Fly-River ; D'Albertis, according to Dr. Beccari.

RHAMNACEÆ.

ALPHITONIA EXCELSA.

Reisseck in Endl. gen. pl. 1098.

South Cape ; Rev. James Chalmers.

LEGUMINOSÆ.

CROTALARIA MEDICAGINEA.

Lamarek, encycl. méth. ii. 201.

Jervis-Island ; Rev. James Chalmers.

INDIGOFERA HIRSUTA.

Linné, spec. plant. 751.

Near Port Moresby ; Rev. W. G. Lawes.

DESMODIUM PULCHELLUM.

Bentham, flor. Hongkong, 83.

Astrolabe-Range ; E. G. Edelfelt.

DESMODIUM TRIQUETRUM.

De Candolle, prodr. ii. 326.

Near Port Moresby ; Rev. W. G. Lawes.

DESMODIUM POLYCARPUM.

De Candolle, prodr. ii. 334.

Near Owen Stanley's Range and on Jervis-Island ; Rev. James Chalmers.

ZORNIA DIPHYLLA.

Persoon, synops. plant. ii. 318.

Near Port Moresby ; Rev. W. G. Lawes.

ERIOSEMA CHINENSE.

T. Vogel in Meyen's Beitr. zur Bot. 31.

Near South Cape ; Rev. James Chalmers.

ERYTHRINA INDICA.

Lamarek, encycl. méth. ii. 391.

Yala-River ; W. Armit.

CASSIA ABSUS.

Linné, spec. plant. 376.

Port Moresby and Jervis-Island ; Rev. J. Chalmers.

ADENANTHERA PAVONINA.

Linné, spec. plant. 384.

Fly-River ; D'Albertis.

SAXIFRAGEÆ.

POLYOSMA HELICIOIDES.

Leaves on very short stalks, lanceolar-ovate, remotely and pointedly denticulated, when young beset on the under side with scattered appressed hair ; pedicels extremely short ; flowers rather small, very slender, outside imperfectly grey-silky ; anthers shorter than the filaments, the latter as well as the style slightly hairy.

On Astrolabe-Range ; George Belford.

This plant seems specifically different from the Javanic *P. ilicifolia* already in still shorter leaf-stalks and more slender flowers ; the fruit remains unknown, and may exhibit further differences. Like other congeners this one also reminds of some *Helicias* in aspect.

THYMELEÆ.

PIMELEA CORNUCOPIÆ.

Solander in Vahl, enum. Plant. i. 305.

Near Astrolabe-Range ; George Belford.

PHALERIA BLUMEI.

Bentham, flora Austral. vi. 38.

Murray-Island ; Rev. James Chalmers.

The length of the calyx seems subject to some variation.

PHALERIA COCCINEA.

Pseudais coccinea, Decaisne in Annal. des Scienc. nat. sér. second xix. 40

Drymispermum coccineum, Beccari in D'Alb. New Guinea ii. 398.

Fly-River ; D'Albertis.

PROTEACEÆ.

GREVILLEA EDELFELTHII.

F. v. M. in Vict. Naturalist, Febr. 1885.

Astrolabe-Range, on damp rocks in shady places ; Edelfelt.

Generic definition doubtful, as neither flowers nor fruits were brought.

RUBIACEÆ.

BIKKIA BRIDGEANA.

F. v. M. in Vict. Naturalist, Febr. 1885.

Dixon's Bay, Bessel-Island ; Capt. Cyprian Bridge, R.N.

OLDENLANDIA AURICULARIA.

F. v. M. syst. Census of Austr. plants, 74.

Cloudy Mountains ; Capt. Bridge.

OLDENLANDIA PANICULATA.

Linné, sp. pl. sec. ed. 1667.

Murray-Island ; Rev. J. Chalmers.

CUCURBITACEÆ.

TRICHOSANTHES LONGIFLORA.

Cogniaux in A. & C. de Cand. monograph. phanerogam. iii. 374.

Soron ; Dr. Beccari.

MOMORDICA MIXTA.

Roxburgh, hort. Benghal. 70.

Ramoi and Andai ; Dr. Beccari.

BENINCASA CERIFERA.

Savi in Bibl. Ital. ix. 158.

New Guinea ; D'Albertis.

MELOTHRIA MUCRONATA.

Cogniaux in A. & C. de Cand. monogr. phanerog. iii. 608.

Andai ; Beccari.

ZANONIA INDICA.

Linné, spec. pl. ed. sec. 1457.

Fly-River ; D'Albertis.

ZANONIA MACROSPERMA.

Blume, Bijdrag. 937.

Andai- and Aru-Islands ; Beccari, according to Cogniaux.

ALSOMITRA BECCARIANA.

Cogniaux in A. & C. de Cand. monogr. phanerog. iii. 932.

Kei-Island ; Beccari.

COMPOSITÆ.

VITTADINIA BRACHYCOMOIDES.

F. v. M. fragm. phytogr. Austr. v. 86.

Near Astrolabe-Range ; Rev. J. Chalmers.

CENTIPEDA ORBICULARIS.

Loureiro, flor. Cochinchin. ii. 492.

Cloudy Mountains and Lorne-Range ; Capt. Bridge.

DICHROCEPHALA ERECTA.

L'Heritier in Desf. catal. hort. Paris, 1804, p. 95.

Lorne-Range ; Capt. Bridge.

BLUMEA LACTUCIFOLIA.

Wallich, numerical list 3088.

Soron ; Dr. E. Beccari.

This and the six following New Guinean Compositæ are given from Signor U. Martelli's treatise on Dr. Beccari's Malayan and Papuan Composites in Caruel's *Nuovo Giornale Botanico* xv. 281-305 (1883).

BLUMEA CHINENSIS.

De Candolle, prodr. v. 444.

Mount Arfak ; Dr. Ed. Beccari.

BLUMEA ARFAKIANA.

Martelli in Caruel giorn. xv. 292.

Mount Arfak ; Dr. Beccari.

BLUMEA VIRENS.

De Candolle in Wight contrib. 14.

Humboldt's Bay ; Dr. Beccari.

BLUMEA AROMATICA.

De Candolle, prodr. v. 88.

Fly-River ; D'Albertis.

MICROGLOSSUM VOLUBILE.

De Candolle, prodr. v. 320.

Mount Arfak ; Dr. Beccari.

ANAPHALIS LONGIFOLIA.

De Candolle, prodr. vi. 271.

Mount Arfak ; Dr. Beccari.

GNAPHALIUM LUTEO-ALBUM.

Linné, spec. plant. 851.

Near Port Moresby ; Rev. W. G. Lawes.

GYNURA SARMENTOSA.

De Candolle, prodr. vi. 298.

Soron ; Dr. Beccari ; also in S.E. New Guinea ; Rev. W. G. Lawes.

CREPIS JAPONICA.

Bentham, flora Hongkong, 194.

Lorne-Range ; Capt. Bridge, R.N.

CAMPANULACEÆ.

WAHLENBERGIA GRACILIS.

Alph. de Candolle, monogr. campan. 142.

Murray- and Jervis-Islands ; Rev. James Chalmers.

CANDOLLEACEÆ.

CANDOLLEA ULIGINOSA.

F. v. M. syst. Census of Austr. pl. 86.

Jervis-Island ; Rev. J. Chalmers.

GOODENIACEÆ.

SCÆVOLA AMBOINENSIS.

Miquel, *Annal. Mus. bot. Lugd. Batav.* i. 210.

Mount Astrolabe; G. Belford.

ERICACEÆ.

RHODODENDRON TOVERIENÆ.

F. v. M. in *Vict. Naturalist* i. 101 (1884).

On Mount Owen Stanley's Range, at a height of several thousand feet; C. Hunstein.

SAPOTACEÆ.

ILLIPE MACLAYANA.

F. v. M. in *Vict. Naturalist* i. 168.

Near the Finisterre-Mountains.

ILLIPE ERSKINEANA.

F. v. M. in *Melbourne Chemist*, April 1885.

South Cape; Rev. J. Chalmers and Rev. W. Gill.

Since the description of this economically important species was published, the telling work of the Rev. Will. Wyatt Gill and the Rev. James Chalmers (on their missionary travels in New Guinea from 1877-1885) has reached me, in which at p. 329 is referred to the Poti-Poti as an umbrageous tree, attaining 60 feet in height, and yielding a globular one-seeded fruit as much as three inches diametrically wide, of apple-smell and agreeable peculiar taste.

APOCYNEÆ.

TABERNÆMONTANA AURANTIACA.

Gaudichaud in Freye. *voy.* 50 et 55, t. 61.

Fly-River; D'Albertis.

Identified by Dr. Beccari.

ACANTHACEÆ.

ERANTHEMUM VARIABLE.

R. Brown, *prodr.* 477.

Lorne-Range; Capt. Bridge.

BIGNONIACEÆ.

DOLICHANDRONE RHEEDEL.

Seemann, *journ. of Bot.* viii. 380 (1870).

Near Astrolabe-Range ; E. G. Edelfelt.

GESNERIACEÆ.

ÆSCHYNANTHUS ARFAKENSIS.

C. B. Clarke in A. & C. de Cand. *monogr. phaner.* v. 36.

Mount Arfak ; Dr. Beccari.

ÆSCHYNANTHUS TUBIFLORUS.

Clarke, *l. c.* 36.

Ansyes ; Beccari.

ÆSCHYNANTHUS LEPTOCLADUS.

Clarke, *l. c.* 39.

Mount Arfak, 6,000 feet ; Beccari.

ÆSCHYNANTHUS PODOCARPUS.

Clarke, *l. c.* 40.

Fly-River ; D'Albertis.

ÆSCHYNANTHUS VERTICILLATUS.

Clarke, *l. c.* 40.

Fly-River ; D'Albertis.

Only foliage known ; the generic position suggested by the author of the present work.

ÆSCHYNANTHUS MICROTRICHUS.

Clarke, *l. c.* 51, t. iii.

Mount Arfak, 6,000 feet ; Beccari.

DICHIOTRICHUM CHALMERSII.

F. v. M. in *Melb. Chemist*, June 1884.

Owen Stanley's Range ; Rev. James Chalmers.

DICHIOTRICHUM BREVIPES.

Clarke, *l. c.*, t. iv.

Mount Arfak ; Beccari.

BÆA TREUBEI.

Forbes in Journ. Linn. Soc. xix. 297.

Astrolabe-Range ; Rev. W. G. Lawes.

In absence of fruit this showy plant was referred by me to *Didymocarpus* (Wing's South. Sc. Rec. Oct. 1882), but the likelihood of a transfer to *Bæa* being required was then already indicated.

BÆA URVILLEI.

Clarke, l. c. 147.

Island Waigiou ; Admiral D'Urville.

EPITHEMA BENTHAMII.

Clarke, l. c. 180.

Mount Arfak ; Beccari.

CYRTANDRA DECURRENS.

De Vriese, pl. Ind. Batav. Reinw. 14.

Andai ; Dr. Beccari.

Identified by Mr. Clarke.

CYRTANDRA CALYCINA.

Bentham in Hook. Lond. journ. ii. 229.

New Guinea ; Hinds, Zippel ;—at Ramoi ; Beccari.

CYRTANDRA HAPALANTHA.

Clarke, l. c. 252.

At Ramoi ; Beccari.

CYRTANDRA LIGULIFERA.

Clarke, l. c. 252.

At Andai and also on Mount Arfak ; Beccari.

CYRTANDRA ALBERTISII.

Clarke, l. c. 254.

Fly-River ; D'Albertis.

SOLANACEÆ.

PHYSALIS MINIMA.

Murray-Island ; Rev. J. Chalmers. Aroa-River, W. Armit.

LOGANIACEÆ.

BUDDLEYA ASIATICA.

Loureiro, fl. Cochinchin. 72.

Aroa-River ; W. Armit.

The small-flowered variety.

CONVOLVULACEÆ.

IPOMŒA ERECTA.

R. Brown, prodr. 487.

Jervis-Island ; Rev. J. Chalmers.

EVOLVULUS LINIFOLIUS.

Linné, sp. pl. sec. edit. 392.

Murray-Island ; Rev. J. Chalmers.

LABIATÆ.

COLEUS SCUTELLAROIDES.

Bentham in Wall. pl. Asiat. rarior. ii. 16.

Near Port Moresby ; Rev. James Chalmers.

CYCADEÆ.

CYCAS SCRATCHLEYANA.

F. v. M. in Vict. Naturalist, Apr. 1885.

Mount Bedford, Jala-River, W. Armit.

ORCHIDEÆ.

DENDROBIUM CININNATUM.

F. v. M. in proc. Roy. Soc. Queensl. i. part 3 (1884).

South-Eastern New Guinea. Described from a cultivated specimen, received through F. M. Bailey, Esq., F.L.S., from the bot. Garden of Brisbane.

DENDROBIUM CHALMERSII.

F. v. M. in Wing's S. Sc. Record, May 1882.

North-Eastern New Guinea ; Rev. J. Chalmers.

DENDROBIUM ALBERTISII.

G. Reichenbach in D'Albertis's New Guinea, 399.

Fly-River ; D'Albertis.

DENDROBIUM LAWESII.

F. v. M. in Melb. Chemist, June 1884.

Owen Stanley's Ranges ; Rev. J. Chalmers.

It is allied to *D. trichostomum*, G. Reichenb. in *Linnæa*, 1876, p. 46.

DENDROBIUM JOHNSONIÆ.

F. v. M. in Wing's Southern Science Record, May 1882.

South-Eastern New Guinea ; Rev. James Chalmers.

From access to more specimens I can now furnish some additional notes on this superb species, which meanwhile has also found its way into conservatory-cultivation.

Root omitting elongated flexuous strong fibres ; stem erect, from 8 inches to much higher, attenuated at the base, gradually thickened towards the middle and also to some extent upwards, contracted again at the summit, consisting of several joints, cylindrical, conspicuously furrowed, in small specimens only about $\frac{1}{2}$ an inch wide at the thickest part, in larger specimens considerably stouter. Leaves few, terminal, almost ovate or lanceolate-ovate, 2-4 inches long, thickly chartaceous, slightly keeled. Racemes infra-terminal, bearing few or several flowers ; peduncle rather slender. Gynostemium minutely two-horned. Anther operculate, blunt, ending in a depressed callus. Pollen masses of waxy consistence, yellow, erect, connate in two pairs, these again coherent, each of the constituting bodies being dimidiate-globular. The characteristics of the anther could only be observed on a solitary flower ; hence further observations are to be instituted, whether the structure thus far points really to *Dendrobium*, the other floral characteristics reminding of *Phalænopsis*. It is however cognate to *D. Sumneri* (F. v. M. fr. vi. 94) and *D. Phalænopsis* (Fitzg. in Gardn. Chron. 1883 p. 38 ; Austral. Orch. part 7) ; of the latter also an excellent representation is given in the Bot. Mag. May 1885, where the great work on Austr. Orchids is referred to as "a solitary example of an illustrated bot. publication of a high order of merit emanating from a British Colony," a sentence *not just* to science in other dominions of the British Colonial Empire.

Dendrobium bifalce, mentioned already in this work I. p. 14, has been already (1862) transferred to the genus *Doritis* (near *Phalænopsis*) by the great orchidographer Dr. G. Reichenbach in his *Xenia* ii. 7.

To *Doritis* belongs also (as *D. paniculata*) the *Carteretia paniculata* (Ach. Rich. sert. *Astrolabe* p. 10, t. 4); conf. B. & H. gen. pl. III, 574; to the same species should likewise be joined *Saccolabium quinquefidum*, Lindley in Hook. Lond. journ. II, 238.—*Dendrobium arachnostachyum*, G. Reichenbach in the *Gardeners' Chronicle* 1877, p. 334, may also prove a Papuan species.

CLEISOSTOMA CRYPTOCHILUM.

F. v. M. in Wing's S. Sc. Record, May 1885.

Astrolabe-Ranges; G. Belford.

APPENDICULA CHALMERSIANA.

F. v. M. in Wing's S. Sc. Record, May 1885.

Astrolabe-Ranges; Rev. James Chalmers.

PHOLIDOTA IMBRICATA.

Lindley in Hook. exot. Flor. ii. t. 138.

Jala-River; W. Armit.

SCITAMINÆ.

CLINOGYNE DICHOTOMA.

Salisbury in transact. hort. soc. of London i. 276.

Fly-River; D'Albertis; according to Dr. Beccari, who quotes this plant under Wallich's and Dietrich's appellation as *Maranta dichotoma*.

AMARYLLIDÆ.

HYPOXIS HYGROMETRICA.

Labillardière, Nov. Holl. plant. spec. i. 82, t. 108.

Near Port-Moresby; Rev. W. G. Lawes.

LILIACEÆ.

DIANELLA ENSIFOLIA.

De Candolle & Redouté *Liliaceæ*, t. 1.

Cloudy Mountains, Lorne-Range; Capt. Bridge.

ARTHROPODIUM STRICTUM.

R. Brown, prodr. 276.

Near Port Moresby; Rev. W. G. Lawes.

IPHIGENIA INDICA.

Kunth, enumer. plant. iv. 213.

Near Astrolabo-Range ; W. Armit.

COMMELYNEÆ.

ANEILEMA GIGANTEUM.

R. Brown, prodr. 271.

South-Eastern New Guinea ; Rev. James Chalmers.

TACCACEÆ.

TACCA PINNATIFIDA.

R. & G. Forster, charact. gener. 69, t. 35.

South-Eastern New Guinea ; Rev. James Chalmers.

PANDANEÆ.

FREYGINETIA INSIGNIS.

Blume, Rumphia, 158, t. 42.

Fly-River ; D'Albertis ; according to Dr. Beechey.

AROIDEÆ.

PISTIA STRATIOTES.

Linné, spec. plant. 963.

South-Eastern New Guinea ; Rev. James Chalmers.

RESTIACEÆ.

RESTIO PILISEPALUS.

Steudel, syn. glumac. ii. 256.

Island Waigiou ; Admiral D'Urville.

Fruit unknown ; genus therefore doubtful.

CYPERACEÆ.

Fuirena umbellata.

Rottboell, icon. et descript. rar. plant. 70, t. 19.

Aroa-River ; Armit.

GRAMINEÆ.

PANICUM SEMIALATUM.

R. Brown, prodr. 192.

Near the Laloki-River; obtained during the Argus-Expedition by Mr. W. Armit.

PANICUM BREVIFOLIUM.

Linné, spec. plant. 59.

Near the Laloki-River; W. Armit.

PANICUM PLICATUM.

Lamarck, illustr. des genr. i. 171.

On the Laloki-River; W. Armit.

ISACHNE AUSTRALIS.

R. Brown, prodr. 196.

Near Lorne-Range; Rev. J. Chalmers.

PASPALUM MINUTIFLORUM.

Steudel, syn. glumac. i. 17.

On the Aroa-River; W. Armit.

SETARIA GLAUCA.

Palisot, Agrostogr. 51, t. 13.

Near the Papuan Gulf; W. Armit. Near Port Moresby; Rev. W. G. Lawes.

PENNISETUM MACROSTACHYUM.

Trinius in Mém. de l'Acad. de St. Petersb. 6 sér. i. 177.

Cloudy Mountains; Capt. Bridge. Near the Aroa-River; W. Armit.

This accords well with Bessa's delineation in the bot. Atlas to Duperrey's voyage t. 11, except that the styles are united below the stigmas.

STENOTAPHRUM SUBULATUM.

Trinius, Mém. de l'Ac. de St. Petersb. 6eme sér. i. 190.

Coast of New Guinea; Dr. Naumann.

Collected during the *Gazelle*-voyage.

CHIONACHNE CYATHOPODA.

F. v. M. in Benth. fl. Austral. vii. 516.

Cloudy Mountains ; Capt. Bridge.

ELEUSINE INDICA.

Gärtner, de fructib. i. 7.

South-Eastern New Guinea ; Armit (Argus-Expedition).

IMPERATA ARUNDINACEA.

Cyrillo, plant. rar. Neapol. fasc. ii. 26.

South-Eastern New Guinea ; Rev. James Chalmers. Especially at Bessel's Island ; Capt. Bridge, R.N.

LYCOPODIACEÆ.

SELAGINELLA VICTORIÆ.

Moore in Gardeners' Chron. 1879, p. 74.

Lousiade-Archipelagus ; Capt. Bridge.

Identified with the following by Mr. J. G. Baker.

SELAGINELLA WALLICHII.

Spring, monograph. de la fam. des Lycop. ii. 143.

Astrolabe-Range ; Edelfelt.

SELAGINELLA MUELLERI.

Baker in Britten's journ. of Bot. xxiii. 122.

Near Port Moresby ; Edelfelt. Mount Bedford ; Armit.

SELAGINELLA LATIFOLIA.

Spring, monogr. ii. 168.

Astrolabe-Range ; Edelfelt.

LYCOPODIUM PINIFOLIUM.

Blume, enum. pl. Javan. 264.

Astrolabe-Range ; E. G. Edelfelt, who found there also *L. squarrosus* and *Selaginella caulescens*.

FILICES.

OPHIOGLOSSUM PENDULUM.

Linné, spec. plant. ed. alt. 1518.

Towards Owen Stanley's Range; Chalmers. Mount Bedford; Armit.
A furcated variety with the ordinary form.

LYGODIUM SCANDENS.

Swartz in Schrad. journ. ii. 106.

Jala-River; Armit.

TRICHOMANES PALLIDUM.

Blume, enum. fil. Javan. 225.

Jala-River; W. Armit.

TRICHOMANES JAVANICUM.

Blume, enum. filic. Javan. 224.

Mount Bedford; W. Armit.

ANGIOPTERIS EVECTA.

G. Hoffmann in comment. Goett. xii. 29.

Astrolabe-Range; Edelfelt. Jala-River; W. Armit.

MARATTIA FRAXINEA.

Smith, plant. icon. t. 48.

Mount Bedford; W. Armit. Astrolabe-Range; E. G. Edelfelt.

CERATOPTERIS THALICTROIDES.

Brogniart in Bullet. de la Soc. philomat. 186.

Near Port Moresby; Rev. J. Chalmers.

LINDSAYA CONCINNA.

J. Smith in Hook. journ. iii. 415.

Mount Bedford; W. Armit. Obtained during the Argus-Expedition
with several of the other ferns here mentioned.

PTERIS GERANIFOLIA.

Raddi, syn. filic. Brasil. 46.

Mount Bedford; W. Armit. Astrolabe-Range; E. G. Edelfelt.

TÆNITIS BLECHNOIDES.

Swartz, synops. filic. 24 et 220.

Mount Bedford ; W. Armit.

ASPIDIUM ULIGINOSUM.

Kunze in Schlechtend. Linnæa xx. 6.

Near Port Moresby ; Rev. J. Chalmers.

POLYPODIUM DIPTERIS.

Blume, enum. filic. Javan. 174, t. 81.

Aroa-River ; W. Armit.

POLYPODIUM ADNASCENS.

Swartz, synops. filic. 25 et 228.

Laloki-River ; W. Armit.

POLYPODIUM SUBDIGITATUM.

Blume, enum. fil. Jav. 196, t. 13.

Towards Port Moresby ; Rev. J. Chalmers.

ACROSTICHUM REPANDUM.

Blume, fl. Javæ 39, t. 14 et 15.

Near South Cape ; Capt. Bridge. Astrolabe-Range ; E. G. Edelfelt.

ACROSTICHUM SPICATUM.

Mount Bedford, at 3,600 feet altitude ; W. Armit.

Of evascular plants as yet a most scanty number is on record from any part of the Papuan Island. The few, known to me, are comprised in the following list:—*Mosses*: Rhizogonium spiniforme, Neckera phyllogoniacea, Lencophanes Reinwardtiana, Entodon Lawesii and seemingly a tall Dawsonia. *Lichens*: Leptogonium inflatum, L. tremelloides, Ocellaria Papuana, Chiodeeton rubricinetum, Graphis venosa, Opegrapha melanophthalma, Trypethelinum grossum, Porina præstans, P. multiseptata ; all these lichens from Dr. Naumann's gatherings. *Fungs*: Lentinus calvescens, Pannus torulosus, Lenzites aspera, Polyporus xanthopus, P. sanguineus, P. flabelliformis, P. longipes, P.

Leprieurii, *P. australis*, *P. senex*, *P. Hasskarlii*, *Trametes occidentalis*, *Hexagonia polygramma*, *Stereum Bonjanum*, *S. lobatum*; all obtained by Mr. Armit. *Algs*: *Sargassum decurrens*, *Cystophyllum muricatum*, *Turbinaria vulgaris*, *Chneospora obtusangula*, *Hydroclathrus cancellatus*, *Vidalia pumila*, *Amansia glomerata*, *Acanthophora dendroides*, *Desmia ambigua*, *Gracilaria lichenoides*, *Sarcodia palmata*, *Hypnea hamulosa*, *H. seticulosa*, *Phycoseris reticulata*, *Chaetomorpha valida*. These cryptogamic plants were named by the following renowned specialists respectively: Dr. C. Mueller, Dr. J. Mueller, Dr. M. C. Cooke, Dr. W. Sonder. New Guinea ought to yield us thousands of evascular cryptograms from its lowlands jungles up to its alpine summits.

The following genera of plants are now known to be represented also in New Guinea, irrespective of those mentioned in the Malesia and in the present work; but the Papuan species so far have as yet not been defined from the mostly imperfect material available: *Oxymitra*, *Chloranthus*, *Busbequea*, *Cratæva*, *Schuurmansia*, *Sterculia*, *Triumfetta*, *Hopea*, *Vateria*, *Antidesma*, *Omalanthus*, *Elatostemma*, *Cudrania*, *Celastrus*, *Samadera*, *Spondias*, *Mollugo*, *Salicornia*, *Alysicarpus*, *Cajanus*, *Uraria*, *Pueraria*, *Strongylodon*, *Lagerstrœmia*, *Nauclea*, *Lasianthus*, *Modcecca*, *Hodgsonia*, *Cucumis*, *Agapetes*, *Labisia*, *Ardisia*, *Diospyros*, *Strychnos*, *Melodinus*, *Graptophyllum*, *Buechnera*, *Spatoglottis*, *Habenaria*, *Smilax*, *Monochoria*, *Scirpodendron*, *Hypelythrum*, *Sporobolus*, *Cyathea*, *Alsophila*, *Hypolepis*, *Spiridens*. Several of these were first mentioned as Papuan by Dr. Beccari in D'Albertis's New Guinea ii. 396-400, where also additional notes on Palms are given. Of many of the genera, previously recorded, now additional species are known, often however only in a state insufficient for exact examination.

The six parts of Dr. Beccari's splendid "Malesia," issued between 1877 and 1884, contain accounts of plants belonging to the orders of Magnoliaceæ, Monimiaceæ, Myristicaceæ, Nepenthaceæ, Violaceæ, Chailletiaceæ, Euphorbiaceæ, Olacinæ, Araliaceæ, Rubiaceæ, Ericaceæ, Coniferæ, Cycadeæ, Burmanniaceæ, Aroidæ and Palmæ—Papuan species being described along with others from the Sunda-Islands, often extensively and connectedly.

On counting up, what is known now of the Papuan vegetation with specific exactitude, it will be found, that about 1,000 species stand as

hitherto defined on literary record. Of these the writings of Blume, Miquel and Scheffer gave about 380 ; Beccari's *Malesia* added to them about 140, largely new to science ; the "Papuan Plants" up to date made additions to the extent of about 420, mostly known from India and Australia before (including 34 evasculares) ; De Candolle's *monographiæ* and some other recent works give about 60 more. Thus the species of plants, hitherto determined, are forming probably not more than one-third or even only one-fourth of those, constituting the flora of vasculares of the great Papuan Island.

From these and other data we are justified to conclude already, that the botanic (though far less the zoologic) features of the Papuan lowlands are mainly Malayan ; but it remains yet to be ascertained, whether the highland-flora of New Guinea is chiefly repeating Himalaian or perhaps Australian types or largely presenting endemic forms. The known presenece of *Araucaria* and *Epacridæ* in temperate altitudes vindicating already for the up-land flora of New Guinea to some extent an Australian character, while the vegetation of the north-east portion of the Australian continent is largely Malayan also.

These questions of the features of the Papuan flora—so important for phyto-geography—will with other scientific problems likely be solved this year to some degree through the two expeditions, which just set out on their glorious errands,—the one under the command of Capt. Everill, R.N., and provided for by the Governments of New South Wales and Victoria ; the other under the leadership of Mr. H. O. Forbes ; the former fitted out by the Geographic Society of Australia solely, the other by that society and several English scientific unions jointly.

Melbourne, June 1885.

DESCRIPTIVE NOTES ON PAPUAN PLANTS,

BY

BARON FERD. VON MUELLER, K.C.M.G., M. & PH.D., F.R.S.

VII.

THIS part of the present publication contains plants from various sources, among them some of the species, collected during Capt. Everill's recent Expedition, the majority of which will be enumerated, so far as new, in the eighth part. While submitting these additional records of the Papuan Flora, it is to be regretted, that so many fair opportunities are absolutely lost by private navigators and travellers, who latterly visited various parts of British New Guinea, for adding to our knowledge of the vegetation by the simple process of pressing and drying specimens of *any* kinds of plants, either in flower or in fruit,—as thus many new forms would come under elucidation, and also many rare though known species would be brought under review for records of additional localities and perhaps also further characteristics, always with due public mentioning of the contributors of the respective material.

Melbourne, February 1886.

DILLENIACEÆ.

TETRACERA EVERILLII.

Scandent ; branchlets, leafstalks and flowerstalks densely beset with long soft reversed and also with short hair ; leaves large, on rather

long stalks, broad-lanceolar, short-acuminated, remotely serrulated and more prominently so towards the summit, soft-hairy on both sides, but only scantily above, hardly paler and somewhat shining beneath; nerves strong, 20-25 from each side of the midrib, pointedly terminating the serratures; panicle much elongated, distantly branched; flowers somewhat cymosely crowded; sepals densely short-hairy outside; petals quite glabrous; slits of anthers short, very divergent; fruitlets rather large, one-seeded, soft-hairy outside, terminated by the slender beak-like style; seed brown, much surpassed by the long-fringed pale arillus. Leaves to 9 inches long and to $3\frac{1}{2}$ inches broad in the only specimen secured. General flowerstalk fully 2 feet long, the short portion of its vestiture close and crisp. Fruitlets usually three, extending considerably beyond the petals, measuring about $\frac{1}{3}$ inch in length, the persistent style nearly $\frac{1}{8}$ inch long.

On the Strickland-River; W. Baeuerlen.

On this conspicuous and well-marked species, the first of the genus from the Papuan Island, I have bestowed the name of the gallant leader of the Expedition, from which the discovery of this and other new plants resulted.

Systematically this *Tetracera* should be placed near the Javanic *T. sericea* and near *T. Sumatrana*.

ANONACEÆ.

EUPOMATIA LAURINA.

R. Brown in Flinders's voyage ii. 597, t. 2.

South-Eastern New Guinea; Rev. James Chalmers.

POLYGALACEÆ.

POLYGALA PERSICARIFOLIA.

De Candolle, prodrom. i. 326.

South-Eastern New Guinea; Rev. James Chalmers.

RUTACEÆ.

EUODIA ALATA.

F. v. M. fragm. vii. 142.

South-Eastern New Guinea; Rev. J. Chalmers. From thence also obtained a species of *Xanthoxylon*.

EUPHORBIACEÆ.

EXCÆCARIA AGALLOCHA.

Linné, syst. veg. edit. decim. 1288.

Strickland-River ; W. Baerlen.

MACARANGA TANARIA.

J. Mueller in De Cand. prodr. xv. part ii. 997.

Fly-River ; C. Hartmann.

URTICEÆ.

CELTIS PHILIPPINENSIS.

Blanco, fl. de Filipinas, 197.

Islands of the Papuan Gulf ; Rev. J. Macfarlane.

MELIACEÆ.

AGLAIA LITORALIS.

Miquel, Annal. Mus. bot. Lugd. iv. 55.

New Guinea ; Zippel.

HEARNIA GLAUDESCENS.

Cas. de Candolle, monogr. phaner. i. 631.

New Guinea ; Zippel.

The genus *Aglaia* has become reduced to *Hearnia*.

BURSERACEÆ.

CANARIUM LEGITIMUM.

Miquel, fl. Ind. Batav. i. pt. ii. 647.

New Guinea ; Zippel.

CANARIUM ANGUSTIFOLIUM.

Pimela angustifolia, Blume Mus. bot. Lugd. Bat. i. 226.

New Guinea ; Zippel.

ANACARDIACEÆ.

MANGIFERA MEMBRANACEA.

Blume, Mus. bot. Lugd. Batav. i. 795.

In New Guinea, according to Dr. Blume.

RHUS RUFA.

Teysmann in Naturk. Tijdschr. xxvii. 52.

New Guinea, the precise locality not noted; Zippel.

SEMECARPUS ARUENSIS.

Engler in A. et C. de Cand. monogr. phanærog. iv. 484.

Aru-Island; collected during the *Challenger*-Expedition.

SALSOLACEÆ.

SALSOLA KALI.

Linné, spec. plant. 222.

Islands in the Papuan Gulf; Rev. J. Macfarlane.

AMARANTACEÆ.

PUPALIA ATROPURPUREA.

Moquin in De Cand. prodr. xiii. pt. ii. 331.

Strickland-River; W. Baerlen.

Flowers of the transmitted specimen remarkably small.

DEERINGIA ALTISSIMA.

F. v. M. fragm. ii. 92.

Sabai-Island; C. Hartmann.

LEGUMINOSÆ.

VIGNA VEXILLATA.

Bentham in Mart. fl. Brasil, Papil 193, t. 50.

Near the Strickland-River; Dr. Bernays.

DESMODIUM BIARTICULATUM.

F. v. M. fragm. phytogr. Austr. ii. 131.

Islands in the Papuan Gulf; Rev. J. Macfarlane.

CROTALARIA INCANA.

Linné, spec. plant. 716.

Islands in the Papuan Gulf; Rev. J. Macfarlane.

MELASTOMACEÆ.

MEDINILLA MAIDENI.

F. v. M. in Wing's South. Scienc. Record, Febr. 1886.

Near the Strickland-River; Baerlen.

ROSACEÆ.

RUBUS ROSIFOLIUS.

Smith, plant. icon. t. 60.

On the Strickland-River; W. Baeuerlen. Sent also by the Rev. James Chalmers from regions more eastward.

SALICARIACEÆ.

LAGERSTRÆMIA FLOS REGINÆ.

Retzius, observ. botan. v. 25.

On the Strickland-River; W. Baeuerlen.

PROTEACEÆ.

GREVILLEA GIBBOSA.

R. Brown in transact. Linn. Soc. x. 177.

On the Strickland-River; W. Baeuerlen.

LORANTHACEÆ.

VISCUM ANGULATUM.

Heyne in De Cand. prodr. iv. 283.

Islands on the south-coast of New Guinea; Rev. J. Macfarlane.

The genus *Notothixos* will probably also be found represented in the Papuan Flora, as Mr. R. Parkinson discovered *N. subaureus* in a large-leaved state with more elongated inflorescence lately in New Britain, transit-forms occurring at Rockingham-Bay. Mr. Parkinson sent from the same island also *Muehlenbeckia platyclada*, *Phylacium bracteosum* and *Perotis latifolia*.

ARALIACEÆ.

PANAX MURRAYI.

F. v. M. fragm. ii. 106.

South-Eastern New Guinea; Rev. James Chalmers.

The obtained specimen is in flower only, but so far agrees with the Australian plant. Sir Joseph Hooker has illustrated the young state of this species with broader leaflets in the Bot. Magazine, t. 6798.

RUBIACEÆ.

MORINDA UMBELLATA.

Linné, sp. pl. 176.

On the Strickland-River; W. Baeuerlen.

An only specimen in fruit: leaves unusually large.

OLDENLANDIA PANICULATA.

Linné, spec. plant. edit. alt. 1667.

Near the Strickland-River ; W. Baenerlen.

CUCURBITACEÆ.

CUCUMIS CHATE.

Linné, syst. nat. edit. decim. 5.

Sabai-Island ; Stewart.

COMPOSITÆ.

ECLIPTA ALBA.

Hasskarl, plant. Javan. rar. 528.

Near the Strickland-River ; W. Baenerlen.

LOGANIACEÆ.

MITREOLA OLDENLANDIODES.

Wallich, numer. list. 4350.

On the Strickland-River ; W. Baenerlen.

CONVOLVULACEÆ.

IPOMÆA CONGESTA.

R. Brown, prodr. 485.

On the Strickland-River ; Baenerlen.

IPOMÆA PELTATA.

Choisy, Convolv. oriental. 70.

On the Strickland-River ; Baenerlen.

APOCYNEÆ.

ORCHIPEDA PAPUANA.

Branchlets angular ; leaves on short rather slender stalks, large, ovate-lanceolar, somewhat paler beneath ; peduncles clougated, two-branched, bearing the flowers in partly racemous cymes ; bracts ovate-roundish, herbaceous, shorter than the stalklets ; calyces campanulate-cylindrical, when flowering nearly three times as long as broad, lobes short semiovate-orbicular ; tube of the corolla slender, as long as the calyx ; lobes rhomboid-orbicular ; anthers inserted near the summit of the corolla-tube ; disk annular, not lobed.

On the Fly-River ; D'Albertis.

The species differs from *O. foetida* and *O. grandifolia* in distinctly petiolated leaves, as well as in smaller flowers; from the former besides in the lobes of the corolla not being much longer than broad; from *O. grandifolia* also in the narrower tube of the corolla and in the not crenulated disk; from *O. gracilipes*, which has likewise stalked leaves, our plant can be distinguished by its more numerous flowers on more robust stalks, perhaps also in fruit-characteristics, those of *O. gracilipes* being unknown; from *O. Sumatrana* the New Guinea plant is widely distinct in the leaves not being remarkably pale beneath, in not quaternate cymes, in calyces neither turgid nor angular at the base, nor cleft beyond the middle, in the not half-exserted corolla-tube and in the latter not bearing the anthers below the middle.

Signor D'Albertis' specimens are in flower only; but seemingly of the identical species a single specimen was brought from the Strickland-River with unripe fruit only; the latter thus measures $1\frac{1}{2}$ inches in height and 2 inches in breadth, and is remarkable for having the two fruitlets connate towards the summit, each being almost dimidiate globular in form, both closely cohering also along the inner angle below the free middle half. The unripe seeds are obcordate-cuncate and densely wrinkled.

Mr. Baeuerlen notes, that the tree is to 25 feet high.

SCROPHULARINÆ.

LINDERNIA REPTANS.

F. v. M., Census of Austral. pl. 97 (implied), Bonnaya reptans, Sprengel syst. veg. i. 41.

On the banks of the Strickland-River; W. Baeuerlen.

The plant is evidently perennial; the corolla less than $\frac{1}{2}$ -inch in length. Two older names exist for this species, but neither is well adapted. Dr. Urban maintains *Ilysanthes* as a genus, and unites with it Bonnaya, both being coetaneous.

LINDERNIA VERONICIFOLIA.

F. v. M. fragm. vi. 101.

On the Strickland-River; Baeuerlen.

ACANTHACEÆ.

LEPTOSIPHONIUM.

Calyx consisting of five narrow gradually long-pointed segments ; tube of the corolla much elongated, very narrow and only at the summit widened ; lobes five, orbicular-ovate, twisted in bud, the upper and lower but slightly unequal ; stamens four, inserted near the summit of the corolla-tube ; the filaments connate in pairs towards their base ; anthers linear, uniform, fixed above the base, glabrous, not appendiculated ; style very long, capillary ; stigma consisting of two small linear-lanceolate recurved lobes, the lower somewhat longer than the other ; ovary narrow, containing many ovules ; hypogynous disk annular, somewhat crenulated ; capsule beelled to the base, quadrangulate-linear, not stipitate ; seed 12-14, flat, almost orbicular ; the funicles produced into curved-subulate retinacles.

A somewhat shrubby plant, with opposite entire leaves and racemose-spicate large flowers, but few or one of them only fully developed.

LEPTOSIPHONIUM STRICKLANDI.

On the Strickland-River ; W. Baeuerlen.

Height of plant to four feet. Leaves short-stalked, ovate- or elongate-lanceolar, acuminate, attaining a length of seven and a breadth of two inches, as well as the branchlets almost glabrous. Inflorescence terminal. Bracts and bracteoles very small, from a dilated base narrow-linear. Calyx divided to near the base, $\frac{1}{4}$ - $\frac{1}{3}$ inch long. Corolla of seemingly yellowish or perhaps whitish color, not spotted, slightly downy outside ; tube almost straight or slightly curved, to $2\frac{1}{2}$ inches long, but only about $\frac{1}{8}$ of an inch wide ; lobes nearly half an inch long or not much longer. Stamens and style short-exserted. Filaments not much different in length. Anthers pale, about $\frac{1}{8}$ inch long. Ovary and style glabrous. Capsule measuring a little over one inch in length, dehiscent close to the base. Seeds not seen quite ripe.

This plant, one of the most beautiful discovered during Captain Everill's expedition, is dedicated to Sir Edward Strickland, K.C.B., who, as President of the Geographic Society of Australasia, devoted

much anxious care and circumspect zeal to originating, promoting and sustaining this first enterprise of the Society.

This new acanthaceous plant, which we hope to see ere long in ornamental culture, cannot well be placed into any of the several genera, to which it is allied, without invalidating their respective characteristics. From *Eranthemum*, whose general aspect it shares, it differs already in the corolla-lobes twisted before expansion, in the double number of stamens as well as in the not stipitated capsule and in the augmented number of ovules and seeds. From *Stenosiphonium* our new genus is readily distinguished by the corolla being neither dilated nor bent above the middle, and by the four anthers being conformous; nevertheless the discovery of middle form may perhaps yet connect it sectionally with that genus.

HYGROPHILA ANGUSTIFOLIA.

R. Brown, prodr. 479.

On the Strickland-River; Baeuerlen.

JUSTICIA PROCUMBENS.

Linné, sp. pl. 15.

South-Eastern New Guinea; Rev. J. Chalmers. The var. *peploides*.

JUSTICIA GLABRA.

J. Koenig in Roxb. hort. Bengh. 4.

Near Astrolabe-Range; Rev. W. G. Lawes.

The lower cell of each anther only very slightly mucronate at the base.

LEPIDAGATHIS HYALINA.

Nees in Wall. pl. Asiat. rar. iii. 95.

Cloudy Mountains; Capt. Bridge. Lorne-Range; Rev. J. Chalmers. Strickland-River; W. Baeuerlen.

GRAPTOPHYLLUM HORTENSE.

Nees in Wallich, pl. Asiat. rar. iii. 102.

On the Strickland-River: W. Baeuerlen.

Stem trailing and partly rooting.

RUNGIA PARVIFLORA.

Nees in Wall. pl. Asiat. rar. iii. 110.

South-Eastern New Guinea ; Rev. G. W. Lawes. The var. *pectinata*.
Strickland-River, Baeuerlen ; Lorne-Range, Capt. Bridge.

EPACRIDÆ.

STYPIHELIA ABNORMIS.

Leucopogon abnormis, Sonder in Lehm. pl. Preiss. i. 325 ; *L. acuminatus*,
Brongniart Atlas bot. de la voy. de Coquille, t. 53.

Waighiou ; D'Urville and Lesson.

LILIACEÆ.

GEITONOPLESIMUM CYMOSUM.

Cunningham in Bot. Mag. t. 3131.

South-Eastern New Guinea ; Rev. J. Chalmers.

CYPERACEÆ.

CYPERUS UMBELLATUS.

Bentham, flor. Hongk. 386.

Proclamation-Creek ; Capt. Bridge, R.N.

As the specific name within the genus has already been employed by
Burmah, Vahl and Roxburgh, it may be advisable to change that of
the present plant to *C. Rheedei*.

CYPERUS PENNATUS.

Lamarek, illustr. des genr. i. 144.

Dixon's Bay, Bessel's Island, Louisiade-Group ; Capt. Bridge, R.N.

HYPELYTRUM LATIFOLIUM.

L. C. Richard in Pers. synops. plant. i. 70.

Strickland-River, Baeuerlen.

An excellent figure in Bot. Magaz. 6282.

LIPOCARPHA MICROCEPHALA.

R. Brown in Tuckey's Congo, 549.

South-Eastern New Guinea ; Rev. J. Chalmers. *Restio pilisepalus*,
mentioned at p. 18 from Steudel's synopsis ii. 256, is according to
Dr. M. T. Masters a cyperaceous plant. See A. et C. de Cand. monogr.
phan. i. 301.

FIMBRISTYLIS MILIACEA.

Vahl, enumer. plant. ii. 287.

Fly-River, at Tsumanta ; W. Baeuerlen.

SCIRPUS DIPSACEUS.

Rottboell, descr. et icon. nov. plant. 56, t. 12, f. 1.

On the Fly-River ; Baeuerlen.

Not yet recorded from the Sunda-Islands.

GRAMINEÆ.

PANICUM CRUS-GALLI.

Linné, spec. plant. 56.

On the Strickland-River ; Baeuerlen.

The awnless variety.

PASPALUM SCROBICULATUM.

Linné, mantissa 29.

On the Strickland-River ; Baeuerlen.

LYCOPODIACEÆ.

PSILOTUM COMPLANATUM.

Swartz in Schrad. journ. ii. 109.

On the Fly-River ; Ch. Hartmann.

FILICES.

LYGODIUM SCANDENS.

Swartz, syn. filic. 152.

Strickland-River ; Baeuerlen (Capt. Everill's Expedition).

SCHIZÆA DIGITATA.

Swartz, syn. filic. 150.

Strickland-River ; Baeuerlen.

GLEICHENIA FLAGELLARIS.

Sprengel, syst. veg. iv. 25.

Strickland-River ; Baeuerlen.

The plant accords with Zollinger's numbered 772 from Java ; the frond-segments are green underneath, representing a form, kept separate by Mettenius as *G. lævigata*, Hooker.

DAVALLIA EMERSONII.

Hooker et Greville, icon. filic., t. 105.

Aroa-River; Armit (*Argus*-Expedition).

DAVALLIA PARVULA.

Wallich, numerical list 247.

Spurs of Owen Stanley's Range; Rev. J. Chalmers. Near Astrolabe-Range; Edelfeldt.

DAVALLIA PECTINATA.

Smith in Act. Taur. v. 414.

Towards the Astrolabe-Range; Edelfeldt.

These three and the following three ferns were identified by Professor Luerssen, who is at present engaged on a connected critical re-examination of all known Polynesian ferns. He combines with *D. pectinata* the *D. Gaimardiana* of Gaudichaud.

DAVALLIA DIVARICATA.

Blume, enum. filic. Javan. 237.

Towards the Astrolabe-Range; Edelfeldt.

LINDSAYA PINNATA.

Mettenius in Miq. Mus. botan. Lugdun. iv. 279.

Aroa-River; Armit (*Argus*-Expedition).

PTERIS ENSIFORMIS.

N. Burmann, flor. Indic. 230.

Towards the Astrolabe-Range; Edelfeldt.

PTERIS INDICA.

Lamarck, encycl. méth. v. 112.

Towards the Astrolabe-Range; Edelfeldt.

PTERIS QUADRIAURITA.

Retzius, observ. vi. 38.

Towards the Astrolabe-Range; Edelfeldt

PTERIS AQUILINA.

Linné, spec. plant. 1075.

Near Port Moresby; Edelfeldt.

PTERIS SILICULOSA.

Desvaux, Mém. de la Soc. Linn. Paris vi. 293.

Towards the Astrolabe-Range; Goldie.

MONOGRAMMA JUNGHIUHNII.

Hooker, spec. filic. v. 123, t. 289.

Strickland-River; Baeuerlen.

A short-fronded form, which seems to demonstrate, that *M. subfalcata* must be regarded as a variety of this species.

ASPLENIUM PRESLEI.

F. v. M. *Scolopendrium longifolium*, Presl. in reliq. Hænk i. 48.

Towards the Astrolabe-Range; Edelfeldt.

ASPLENIUM CUNEATUM.

Lamarck, encycl. méth. ii. 309.

Towards the Astrolabe-Range; Edelfeldt.

ASPLENIUM LONGISSIMUM.

Blume, enum. filic. Javan. 178.

Astrolabe-Range; Edelfeldt.

A small-fronded form with blunt segments; these auriculated only upwards.

Mr. Edelfeldt's plants were all kindly communicated by Th. Gulliver, Esq., F.L.S.

ASPIDIUM TUBEROSUM.

Bory in Willd. sp. plant, t. 234.

Aroa; Armit (*Argus*-Expedition).

POLYPODIUM AVENIUM.

Mettenius, Polypod. 220, t. iii.

Towards the Astrolabe-Range; Edelfeldt.

This and the four preceding identified by Dr. Luerssen.

ANTROPHYUM PLANTAGINEUM.

Kaulfuss, enum. filic. 197.

On the Strickland-River; Baeuerlen. Also on the south-eastern coast of New Guinea; Armit.

Some of the fronds nearly three inches broad.

JUNGERMANNIACEÆ.

Plagiochila semialata Lacoste, *P. Lawesii* Gottsehe, *Chiloseyphus argutus* Nees, *Trichocolea tomentella* Nees, *Lophocolea reflexistipulea* Stephani. These five from the Missionaries-collection named by Mr. F. Stephani.

FUNGI.

Lentinus tener Kl., *L. pergamenus* Lév., *Schizophyllum commune* Fr., *Lenzites deplanata* Fr., *L. corrugata* Kl., *Polyporus xanthopus* Fr., *P. affinis* Nees, *P. nephridius*, *P. portentosus*, *P. rubidus*, *P. elongatus*, *P. caliginosus*, *P. sealaris*, *P. ferreus*, *P. rasipes*, *P. isidioides*, *P. demissus*, *P. vinosus*, *P. squamiformis*, *P. holosclerus* Berk., *P. peetinatus* Kl., *P. hirsutus* Fr., *P. microeyelus* Lév., *P. elegans*, *P. seruposus* Fr., *P. nigro-laeatus*, *P. pyrrochreas* Cooke, *P. zonalis* Koenig, *P. Auberianus* Mont., *Trametes Muelleri*, *T. laetinea*, *T. Sprucei*, *Dædalea ineoneinna*, *Hexagona tenuis* Berk., *Favolus Brasiliensis*, *F. multiplex* Lév., *Lasehia tremellosa* Fr., *Irpex flavus* Kl., *Cladoderris dendritica* Fr., *Thelephora lamellata* Berk., *Stereum involutum* Kl., *S. elegans*, *S. cyathiforme*, *S. bicolor* Fr., *S. Thozetii* Berk., *Hirneola polytricha* Fr., *Xylaria involuta* Kl.

All these gathered by Mr. W. Armit during the *Argus*-Expedition; the identifications by Dr. M. C. Cooke, the mycologie specialist.

Since the issue of the sixth number of this publication, Dr. Beccari's "Malesia" part vii. has appeared, which is almost entirely devoted to the genus *Hydnophytum*, with numerous superb illustrations from the author's own hands; several of the species now elucidated came from New Guinea.

DESCRIPTIVE NOTES ON PAPUAN PLANTS,

BY

BARON FERD. VON MUELLER, K.C.M.G., M. & PH.D., F.R.S.

VIII.

THE present part of this publication enumerates miscellaneous plants, obtained from various contributors, and will be early followed up by further elucidations of material already accumulated. This will help to gain gradually a fuller insight into the constituents of the Papuan Flora, so that the Australian element in it may be accurately determined, the differences be shown between the vegetation of the northern and southern slopes of the ranges, and further the peculiarities of the temperate and cool zones of vegetation be extensively set forth, irrespective of comparisons with the Floras of other countries also in this respect. On these subjects already some observations were offered in the last annual address, delivered at the Victorian branch of the Geographic Society of Australasia. In the continuation of these researches, the utilitarian considerations will likewise receive due attention; thus some of the leading timber-trees will become systematically named, while likely new sources for Damar, Gambier, Caoutchouc, Gutta Percha, Ebony, Santalwood be pointed out, irrespective of what is known already of the Podocarpus-Pines, Cedar-timber, Teak, Cocos- and Pandanus-

fibre, native Sugar-cane, Massey-bark, Sago, Bananas, Ginger and other indigenous vegetable products of the great island, available for utilitarian purposes directly there.

Melbourne, March 1886.

RANUNCULACEÆ.

CLEMATIS GLYCINOIDES.

De Candolle, syst. veg. i. 145.

Towards Astrolabe-Range ; Rev. J. Chalmers. Also obtained by Mr. Edelfelt.

A Clematis with much dissected leaves was sent from Lorne-Range ; but the specimens are not sufficient for naming. In the higher regions of New Guinea will doubtless yet be found many congeneric and also some other co-ordinal plants.

DILLENIACEÆ.

WORMIA MACDONALDI.

F. v. M. in Victorian Naturalist ii. 134.

On the Strickland-River ; W. Baenerlen (Expedition of the Geographic Society of Australasia).

LAURINEÆ.

HERNANDIA PELTATA.

Meissner in Cand. prodr. xv. 263.

On the Strickland-River ; Baenerlen.

This is the plant previously mentioned on the authority of the Dutch Botanists as *H. Sonora* ; but it is specifically distinct from the genuine American species of that name.

CAPPARIDÆ.

CAPPARIS NOBILIS.

F. v. M. in Benth. flor. Austr. i. 95.

South-eastern New Guinea ; Rev. James Chalmers.

C. subacuta from Java is closely allied to this plant, if not identical with it.

POLYGALACEÆ.

SECURIDACA BRACTEATA.

A. Bennett in J. Hook. fl. of Brit. India i. 208.

Var. Papuana ; flowers smaller, inner sepals glabrous.

South-eastern New Guinea ; Rev. J. Chalmers.

The plant conforms with the characteristics, set forth in the original description, except in the notes above given ; but it may perhaps differ essentially as regards fruit ; in that case, the name of the variety would become that of a distinct species. The leaves resemble in form those of *S. pubescens*. The Papuan plant is distinguishable already from *S. Tavoyana* (as seen in Major Jenkins's collection from Assam) by its smaller gradually pointed leaves, by the shorter pedicels, persistent bracts and more silky outer sepals.

TILIACEÆ.

CORCHORUS TRIDENS.

Linné, Mantissa altera 566.

Islands on the south-east coast of New Guinea ; Rev. J. Chalmers.

C. acutangulus was sent by Mr. R. Parkinson from New Britain.

GREWIA ORIENTALIS.

Linné, spec. pl. 964.

Near Port Moresby.

A rather broad-leaved form.

MALVACEÆ.

HIBISCUS RADIATUS.

Cavanilles, dissert. 150, t. 54.

Islands on the south coast of New Guinea ; Rev. J. Chalmers.

In the collection, brought by Capt. Everill's expedition, also fruit-specimens of *Hibiscus D'Albertisii* are contained ; the capsule is about

as long as the calyx, almost conical-ovate; the valves are gradually pointed; the five cells subdivided by inflection of the valves; seeds several in each cell, woolly-tomentose. Mr. Baeuerlen noted, that this *Hibiscus* attains a height of 40 feet.

The *Sida*, mentioned at p. 59 of the first part of this work as occurring in the Gilbert-, Union- and Ellice-group, is *S. fallax*.

RUTACEÆ.

LUNASIA AMARA.

M. Blanco, flora de Filipinas 783.

On Lorne-Range; Rev. J. Chalmers. On Astrolabe-Range; Edelfelt.

At first sight this might be taken for an urticaceous plant, if only seen in flower. The specimens obtained from New Guinea are all stamiferous only. Lobed and lobeless leaves occur sometimes on the same branch. The Papuan plant seems not distinct from that of the Philippine-Islands; the latter has received likely additional elucidation from Don Sebastian Vidal y Soler in his notes on Cuming's plants recently issued in Manila, and referred to by Mr. J. Britten in his journal of Botany xxiv. 57. Perhaps the genus will prove to be monotypic, as Miquel (Annal. mus. bot. Lugd. Bat. iii. 89) already expressed some doubts about the distinctness of the Sundaic species. The likely identity of *Lunasia* with *Rabelaisia* was as early as 1845 indicated by Planchon. *L. amara* is doubtless of medicinal value.

EUPHORBIACEÆ.

HEMICYCLIA AUSTRALASICA.

J. Mueller in De Cand. prodr. xv. pt. ii. 487.

Fisherman's Island; Rev. J. Chalmers.

ANACARDIACEÆ.

EUROSCHINUS FALCATUS.

J. Hooker in B. & H. gen. plant. i. 422.

Towards Port Moresby on shady watercourses; Edelfelt.

The specimens are only in bud, but accord so far well with that form of this variable species, which produces more numerous narrower and almost glabrous leaflets.

CARYOPHYLLÆ.

POLYCARPÆA SPIROSTYLIS.

F. v. M. plants of Babbage's Expedit. 8.
Islands at the Papuan Gulf ; C. Hartmann.

FICOIDEÆ.

MOLLUGO STRICTA.

Linné, spec. plant. edit. alt. 131.
Islands on the south-coast of New Guinea ; Rev. J. Chalmers.

AMARANTACEÆ.

DEERINGIA INDICA.

Zollinger in De Cand. prodr. xiii. pt. ii. 236.
Towards Port Moresby ; Edelfelt (communicated by Th. Gulliver Esq.).
Slrubby ; reminds of Phytolacca.

LEGUMINOSÆ.

INDIGOFERA PARVIFLORA.

Heyne in Wall. numeric. list, 5457.
Fisherman's Island ; Rev. James Chalmers.

KENNEDYA RETUSA.

F. v. M. fragm. phytogr. Austr. v. 106.
On the Fly-River ; D'Albertis. Also found during Capt. Everill's Expedition.
Leaflets to 5 inches long. Seeds black, not shining, $\frac{1}{4}$ — $\frac{1}{3}$ inch long.

CANAVALIA ENSIFORMIS.

De Candolle, prodr. ii. 404.
Saibai-Island ; C. Hartmann.

PONGAMIA GLABRA.

Ventenat, jard. de Malmais. t. 28.
Islands on the south-coast of New Guinea ; C. Hartmann.
P. volubilis, mentioned by Scheffer, is identical with Derris elliptica, Benth. in Journ. Linn. Soc. iv. suppl. 111 ; while D. Timorensis does not differ from D. scandens, as observed by J. G. Baker.

CYNOMETRA MINUTIFLORA.

F. v. M. (inedited).

South-eastern part of New Guinea ; Rev. J. Chalmers.

A description of this species and of *Pterocarpus Papuanus* will appear in the April number of the *Australian Journal of Pharmacy*.

RHIZOPHOREÆ.

BRUGUIERA RHEDEL.

Blume, enumer. pl. Javan. 92.

Coast of South-eastern New Guinea ; Rev. W. G. Lawes.

ARISTOLOCHACEÆ.

ARISTOLOCHIA INDICA.

Linné, spec. plant. 960.

At the Papuan Gulf ; Rev. S. Maefarlane.

Leaves to 7 inches long.

RUBIACEÆ.

UNCARIA BERNAYSII.

F. v. M. in Austral. Journ. of Pharmacy, Febr. 1886.

On the Strickland-River ; Dr. Bernays and W. Baeuerlen (Expedition of the Geographic Society of Australasia).

NAUCLEA CHALMERSII.

Branchlets short-downy, soon glabrescent ; leaves almost lanceolar, somewhat acuminate, nearly sessile, shining above, paler beneath, glabrescent ; flower-heads solitary, the peduncle somewhat longer ; lobes of the calyx elongated in setaceous-linear imperfectly silky thinly stipitate appendages, the remaining portion finally semilanceolar, prominently one-nerved and somewhat pointed ; tube obverse prismatic-conical ; corolla glabrous, its lobes deltoid-semilanceolar, corniculated, several times shorter than the slender upwards gradually widened tube ; filaments very short, curved ; anthers almost hastate-oblong, nearly enclosed ; style filiform, glabrous, half-exserted ; stigma globular-ovate ; fruits small, seceding up to the calyx-lobes into four valves ; seeds

glandular-rough, much attenuated and somewhat fringed at each extremity.

Lorne-Range ; Rev. J. Chalmers. Rona-falls ; Edelfelt.

Leaves chartaceous, crowded in pairs towards the summit of the branchlets, mostly 3-5 inches long, $\frac{3}{4}$ -1 $\frac{1}{4}$ inch broad. Stipules almost oblong, about $\frac{2}{3}$ inch long, quickly deciduous. Expanded flowerheads (not counting the emerging styles) measuring rather more than one inch. Receptacle glabrous. Appendages of calyx-lobes about $\frac{1}{4}$ inch long, not dilated at the end. Corolla glabrous, about $\frac{1}{3}$ inch long. Style glabrous. Valves of the capsule hardly $\frac{1}{4}$ inch long. Seeds pale-brown, the extremities almost hyaline.

This species might systematically be placed near *N. Molluccana* ; it does not accord with the description of any congener hitherto recorded.

WENDLANDIA BUDDLEACEA.

Branchlets as well as peduncles and petioles brown-tomentose ; stipules broad, often deltoid-bilobed, persistent ; leaves opposite, chartaceous, ovate-lanceolar, short-acuminate, suddenly or gradually passing into a rather short stalk, shining and nearly glabrous above, paler green beneath and there along the midrib as well as the cost-like lateral rather distant nerves subtle-hairy ; panicle ample, spreading, terminal, bearing numerous fascicles and short spikes of flowers along its branches ; calyx subtle-hairy, its five lobes deltoid-semilanceolar ; tube of the corolla about thrice as long as its five roundish-ovate lobes, bearded inside ; stamens five ; filaments very short ; anthers exerted, not distinctly bearded ; stigmas three times shorter than the style ; limb of the young fruiting calyx nearly as long as the turgid tube.

On the Cloudy Mountains ; Rev. James Chalmers. On the Astrolabe-Range ; Will. Armit (*Argus-Expedition*).

Branchlets robust. Leaves, so far as seen, attaining a length of 8 inches and a breadth of 3 $\frac{1}{2}$ inches ; veins prominent underneath. Branches of the panicle much spreading, the lower very elongated. Bracts narrow, acute, short-hairy. Flowers hardly $\frac{1}{4}$ inch long. Bracteoles often shorter than the calyx. Expanded anthers nearly ellipsoid. Ripe fruit not obtained.

This plant bears a singular resemblance to some Buddleas. Among several allied congeners the Papuan species approaches nearest to *W. tinctoria*; but the branchlets are thicker and not distinctly angular, the leaves larger, the stipules of much greater size also of more foliaceous texture and slit, the flower-clusters frequently alternate and the tube of the corolla rather less slender; fruits with ripe seeds need yet to be compared.

The bark of this new *Wendlandia* can probably likewise be utilized for dye-purposes.

COMPOSITÆ.

SPHÆRANTHUS MICROCEPHALUS.

Willdenow, spec. plant. iii. 2395.

Saibai-Island; Stewart.

ERICACEÆ.

AGAPETES MOORHOUSIANA.

F. v. M. in Wing's Southern Science Record, new ser. vol. ii. Febr. 1886.

South-eastern New Guinea; Rev. J. Chalmers.

ASCLEPIADEÆ.

GYMNANTHERA NITIDA.

R. Brown, prodr. fl. Nov. Holl. 464.

South-eastern New Guinea; Rev. J. Chalmers.

VERBENACEÆ.

GMELINA MACROPHYLLA.

Bentham, flor. Austral. v. 65.

Saibai-Island; C. Stewart. Fly-River; W. Baeuerlen.

The length of the petioles is variable, so the width of the leaves, particularly at their base, and also the degree of paleness underneath.

FARADAYA ALBERTISII.

Climbing; leaves all opposite, lanceolate-ovate, conspicuously acuminate, of thick-chartaceous texture, not shining, their ascending lateral nerves very prominent underneath, the veins also particularly con-

spicuous ; some scattered orbicular flat glands on the lower leaf-page, especially near the base ; panicles axillary, shorter than the leaves ; primary and secondary peduncles abbreviated ; pedicels very short ; calyx rather long, while in bud hornlike-pointed, soon slit unilaterally, finally cleft into two semilanceolar thinly acuminate lobes ; tube of the corolla much longer than the calyx ; stamens inserted near the middle of the corolla-tube ; filaments short-hairy except towards the summit ; anthers obovoid, bilobed downward ; style glabrous ; ovary globular, four-furrowed, thinly grey-velvety.

On the Fly-River ; D'Albertis.

This species is closely akin to *F. splendida* ; the petioles are however thicker, the leaves of a firmer texture with stronger nervation and venation and also with a longer and more pointed terminal protraction, and they are not shining ; the stalks and stalklets of the flowers are much shorter, by which means the inflorescence becomes very contracted ; the bud of the calyx is longer and acutely pointed ; perhaps the fresh flowers and ripe fruits may exhibit other marks of discrimination. A comparison should still be instituted with *F. Papua* from Andaj, described by the lamented Dr. Scheffer at p. 42 in the *Annales du jardin botanique de Buitenzorg*, volume premier ; but therein the narrow acumination of the leaves is not alluded to, while according to Dr. Scheffer's description the petioles of his plant are longer, the flowers larger, and the stamens inserted lower on the corolla-tube. He records simultaneously the interesting observation, that sometimes all four of the large distinct fruitlets become developed.

FARADAYA TERNIFOLIA.

Scandent ; leaves ternately verticillate, short-stalked, oblong-lanceolate, short-acuminate, of thin chartaceous texture, shining on both sides, their ascending lateral nerves rather prominent underneath and also the veins conspicuous, orbicular glands beneath very scanty or absent ; panicle shorter than the leaves ; primary and secondary peduncles abbreviated ; pedicels very short ; calyx rather small, while in bud pyriform-ovate, rounded-blunt and only minutely apiculated, by longitudinal rupture soon imperfectly bivalvular ; corolla outside subtle-

downy; stamens inserted near the base of the corolla-tube; filaments densely bearded at the base; anthers ovate, bilobed downward; style glabrous; ovary depressed-globular, four-furrowed, thinly velvety.

In southern New Guinea, collected during the Expedition of the Australian Geographic Society.

This species is easily distinguished from *F. splendida* and *F. Albertisii* already by the shape of the leaves, not broader in the lower portion than in the upper, also by the very blunt and short calyx. Some allowance must be made for the imperfectness of the definition, above sketched out, as only specimens in bud are as yet available for examination here. The ternate position of the leaves may not prove a constant characteristic. The form of the leaves bring our plant nearest to *F. Vitiensis*, but they are longer in proportion to breadth, also blunt at the base; the crowded position of the flowers and the size and shape of the calyces are similar; the full differences must be traced out at some future time.

If *F. amieorum* and *F. ovalifolia* really belong to *Clerodendron*, then *F. Powellii* (Seem. Journ. of Bot. 1868, p. 342) should be added to the same group of species within the genus. Mr. John Horne (*A Year in Fiji*, p. 275) indicates three species of *Faradaya* for the Fiji-Islands.

ASPERIFOLIÆ.

HELIOTROPIMUM OVALIFOLIUM.

Forskæl, Flor. Ægypt. Arab. 47.

Islands of the Papuan Gulf; Rev. S. Macfarlane.

MYRSINÆ.

ARDISIA SOLANACEA.

Roxburgh, plants of the coast of Coromandel 27, t. 27 (1795).

Var. *haplosciadca*; leaves of tender texture; peduncles thin, all lateral, bearing 4-5 almost umbellate flowers on slender rather long pedicels.

On the Strickland-River; W. Bæuerlen (Exped. of the geogr. Soc. of Australasia).

I have not ventured to separate this plant from the more robust

genuine *A. solanacea*, especially as no fruits are available for comparison. But Roxburgh's plant seems quite distinct from what Thwaites regards as the true *A. humilis*, the leaves not being chiefly at or towards the summit of the branchlets and having less copious and less prominent veins, while the flowers are mostly terminal, nearly all paniculate and borne on shorter stalks and stalklets; further (as well pointed out by Thwaites) the fruits are black not bright-red. Should the Papuan plant prove distinct, then the name of the variety would become specific.

The genus *Pimelandra* can only be regarded as a section of *Ardisia*; but the East-Australian *A. Pseudo-Jambosa* should be transferred to *Labisia*, notwithstanding considerable difference in habit and inflorescence; it would however form a peculiar section in that genus.

CONVOLVULACEÆ.

IPOMŒA TURPETHUM.

R. Brown, prodr. fl. Nov. Holl. 485.

Saibai-Island; Rev. James Macfarlane.

The narrow-leaved form, brought by Dr. Seemann from Fiji, was found by the Rev. W. G. Lawes also near Port Moresby.

SOLANACEÆ.

SOLANUM VIRIDE.

R. Brown, prodr. fl. Nov. Holl. 445.

South-eastern New Guinea; Rev. J. Chalmers. Sent also from New Britain by Mr. R. Parkinson. The leaves are sometimes nearly a foot long.

SCROPHULARINÆ.

CENTRANTHERA HISPIDA.

Strickland-River, W. Baeuerlen.

ORCHIDEÆ.

OBERONIA HEXAPTERA.

Glabrous, comparatively tall; stem much elongated; leaves many, of very considerable length, broadly linear, slightly falcate; raceme

spike-like, on a very short stalk, much elongated; rachis prominently angular; flowers exceedingly numerous, crowded but individually scattered; bracts ovate-lanceolar, somewhat acuminate; stalklets spreading, not quite half as long as the fruit, also considerably shorter than the bracts; capsules oblique-ellipsoid, longitudinally traversed by six narrow membranes.

On the stems of trees at the Laloki-River; W. Armit (*Argus-Expedition*).

The specimen obtained about $1\frac{1}{2}$ foot high. Leaves distichous, the upper attaining a length of 7 inches and a breadth of about $\frac{1}{2}$ inch, the others downward gradually decreasing in size. Raceme terminal, about 6 inches long, solitary. Flowers withered on our only specimen. Fruit seen merely in a semimature state, then about $\frac{1}{8}$ inch long.

This species has its upper leaves nearly as long as those of *O. acaulis*, though they probably never gain the same breadth; in drying they become membranous; the spike or raceme is also as long as in that congener, but the stature is widely different; the rachis is lined with very narrow yet conspicuous membranes, and so the tube of the calyx, while the flowers stand in a less close approach to each other. Our plant might be placed near *O. miniata*, from which the more numerous leaves and glabrous stalklets already distinguish it. As regards the membranously lined fruit *O. hexaptera* has some counterpart in *O. microphylla*, of which Blume distinctly says, that it has triquetrous capsules.

SCITAMINEÆ.

MUSA MACLAYI.

F. v. M. in proceed. of the Linn. Soc. of New South Wales x. 355.

Eastern New Guinea; N. de Miklouho-Maclay.

A second Papuan native *Musa* is alluded to on the same occasion.

COMMELYNEÆ.

FLORISCOPA SCANDENS.

Loureiro, flor. Cochinchin. i. 193.

Laloki-River; W. Armit (*Argus-Expedition*).

AROIDEÆ.

ACORUS CALAMUS.

Linné, spec. plant. 324.

The variety *terrestris* of Rumphius.

South-Cape ; Rev. J. Chalmers.

FLUVIALES.

APONOGETON CRISPUS.

Thunberg, nov. gener. iv. 72.

Laloki-River, on rocks under water ; W. Armit (*Argus*-Expedition).

CYPERACEÆ.

MAPANIA HYPELYTROIDES.

F. v. M. in Benth. flor. Austr. vii. 341.

Fly-River ; D'Albertis. Strickland-River ; Baeuerlen.

Ripe fruit still unknown.

Mr. Baeuerlen observed this rush to attain a height of 12 feet, and says that it is nicely scented when fresh.

SCLERIA ORYZOIDES.

Presl. reliq. Hacnk. iii. 201.

Strickland-River ; W. Baeuerlen.

GRAMINEÆ.

ANTHISTIRIA GIGANTEA.

Cavanilles, icon. v. t. 458.

South-eastern New Guinea ; W. Armit (*Argus*-Expedition).

Prof. Hackel, the special investigator of grasses, proves *Perobachne secunda* to be exactly identical with this plant.

LEPTASPIS URCEOLATA.

R. Brown in Horsf. plant Javan. rarior, 23 t. 6.

Strickland-River ; W. Baeuerlen.

L. Manillensis, according to the short diagnosis given by Steudel (*Glumae*. ii. 8), must be closely allied to *L. urceolata*.

FILICES.

DAVALLIA PARALLELA.

Wallich, numeric list 251.

On the Strickland-River ; W. Baeuerlen.

The lower pinnæ sometimes ascendant.

DAVALLIA CONTIGUA.

Swartz, synops. fil. 130.

Strickland-River ; W. Baeuerlen (Expedition of the Austral. geogr. Society).

Sometimes fruiting already at the height of 4 or 5 inches ; not rarely one series of sori only to a segment.

ASPLENium BELANGERI.

Kunze in Botan. Zeitung vi. 176.

On the Strickland-River with *A. silvaticum* ; Baeuerlen.

Some of the specimens have the pinnæ more elongated than in the illustration xli. of Hooker's exotic ferns, in some instances the pinnæ being narrowly protracted at their summit.

POLYPODIUM VERRUCOSUM.

Wallich, numeric list 296.

Strickland-River ; Baeuerlen.

This fern attains there a length of fully 6 feet, though growing on trees ; the pinnæ are sometimes still larger than those represented in Sir Will. Hooker's "Garden-Ferns," pl. 41, and are often thinly chartaceous. The identical species occurs in various places of North-eastern Queensland, from whence Mr. Kefford records it 12 feet high !

LICHENES.

Leptogonium tremelloides, Fries ; *Cladonia fimbriata*, Schærer ; *Ricasolia Schæreri*, Nylander ; *Sticta Karsteni*, J. Mueller ; *Sticta sulphurea*, Schærer and *Stictina quercians*, Nylander, are recorded for New Guinea by Dr. J. Mueller, the leading Lichenologist of the present time, from material placed at his disposal by the writer.

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BARON FERD. VON MUELLER, K.C.M.G., M. & PH.D., F.R.S.

IX.

AFTER a long interval another part of this publication is offered, the author's attention having for the last few years been much absorbed in other literary engagements, mostly unforeseen and officially urgent. Meanwhile Beccari's celebrated "Malesia," which is largely devoted to Papuan plants, has advanced to the end of the third volume. Also a valuable enumeration appeared in Britten's *Journal of Botany*, vol. xxiv., by Mr. H. N. Ridley, comprising the Monocotyledoneæ of Mr. H. O. Forbes' Papuan collections. Furthermore an important treatise was issued at the close of 1889 by Dr. K. Schumann and Dr. M. Hollrung on the "Flora of Kaiser Wilhelm's Land," while simultaneously the Royal Society of Victoria in a special essay has published the observations on the highland-plants, discovered by His Excellency Sir William Macgregor during his memorable ascent of the Owen Stanley's Ranges. As these four publications, irrespective of some connected writings on Acotyledoneæ, are extensive as well as special and compact, it will not be necessary, to transfer any details from them to the pages of this work; but scattered minor data, obtainable from various sources, since the Eighth part was issued, have been brought together in the Ninth now for convenience of reference.

It is intended, to devote the Tenth Part chiefly to descriptions of plants, gathered by Mr. Forbes and by Mr. Baeuerlen under the auspices or aid of the Royal Geographic Society of Australia, and further it is hoped, that thus the second volume of this work will be finished in the course of the present year.

Melbourne, May 1890.

NYMPHÆACEÆ.

NELUMBO NUCIFERA.

Gaertner, de fructib. i. 73.

On the Fly-River; Sir William Macgregor.

Jan. 2nd 1890, extending from 7 miles above Everill-Junction for a distance of 30 miles upwards.

To this plant is specially referred in the despatch of His Excellency from Kiwai, dated 4th Febr. 1890, p. 3. Leaves were found to a diameter of fully two feet, flowers to a diameter of 10 inches, with 400-500 stamens. Hundreds of plants may there occur in a single lagoon.

Unrecorded among Australian localities for this plant remained the Gilbert's River. Found a few years ago by Dr. Hollrung also on the Empress-Augusta's River.

ANONACEÆ.

HIMANTANDRA BELGRAVEANA.

F. v. M. in Austral. Journ. of Pharm. Jan. 1887.

Near the Owen-Stanley's Ranges; H. O. Forbes.

DROSERACEÆ.

DROSER A PETIOLARIS.

R. Brown in De Candolle prodr. i. 318.

Mai-Kussa; Sir William Macgregor.

The specimens obtained had not yet developed flowers; but as the foliage is so characteristic and as the species exist on the opposite Australian coast, no doubt need be entertained about the identity of the Papuan plant.

POLYGALACEÆ.

SALOMONIA OBLONGIFOLIA.

De Candolle, prodr. i. 354.

Hynes-River; Sir Will. Macgregor.

POLYGALA CHINENSIS.

Linné, Spec. Plant 704.

Hynes-River; Sir Will. Macgregor.

TERNSTROEMICEÆ.

TREMATANTHERA DUFURI.

F. v. M. in Vict. Naturalist Oct. 1886.

Jala-River; Armit. Base of Owen-Stanley's Ranges; H. O. Forbes.

STERCULIACEÆ.

PTERYGOTA FORBESII.

F. v. M. in Vict. Naturalist iii. 46.

Near the southern base of the Owen-Stanley's Ranges; H. O. Forbes.

In the same volume p. 63 the presence of a congener in Brazil is indicated, for which the specific name *basiloxylon* would be preferable to that of *rex*, as derived from the vernacular "Pao del Rey."

STERCULIA EDELFEITII.

F. v. M. in Vict. Naturalist iii. 47.

Near the Astrolabe-Range; E. G. Edelfelt. Allied to *S. rufa*.

STERCULIA ONCINOCARPA.

F. v. M. and H. O. Forbes in the Vict. Naturalist iii. 49.

Mountains close to the south of the Owen-Stanley's Ranges; H. O. Forbes.

BRACHYCHITON CARRUTHERSI.

F. v. M. in Vict. Naturalist iii. 50.

Mountains close to the south of the Owen-Stanley's Ranges;
H. O. Forbes.

TILIACEÆ.

TRIUMFETTA RHOMBOIDEA.

N. Jacquin, Select. Stirp. Americ. Hist. 147, t. 90, var. angulata.

Aroa-River; Armit.

Mentioned as Papuan already in the Proc. L. S. of N.S.W., sec.
ser. ii. 422.

TRIUMFETTA PILOSA.

Roth, Nov. Plant. Spec. 223.

Southern base of Owen-Stanley's Ranges and South-Cape; Rev.
James Chalmers. Collected also in Mioko by Bêche.

ELÆOCARPUS SAYERI.

F. v. M. in the Transact. of the R. S. of Vict. 1887, p. 6-7.

At elevations of about 7,000 feet near Mt. Obree; Sayer.

A reference is made in the above print also to E. Reedyi.

MELIACEÆ.

CEDRELA TOONA.

Roxburgh, Plants of Coromandel iii. 33, t. 238.

Fly-River; Sir William Macgregor.

The material is not sufficient for exactly determining the species, but seems to indicate identity of this Papuan with the "Singapore Red Cedar," with which the *C. australis* appears not to be absolutely identical, particularly in its far extra-tropic state, that congener approaching in its affinity closely *C. microcarpa*. The diagnostic of some of the *Codrelas* needs yet more extended disquisition. Thus Surgeon-Major Dr. G. King in a direct communication to the writer of these pages pointed out some years ago, that *C. serrata* differs from *C. Toona* in habit, in growth at always higher elevations, in wood, inflorescence and seeds, the latter having the membranous expansion only at one end. Shipments of "Cedar-timber" (or rather "Cedrel-timber") have now and then been brought to Melbourne.

RUTACEÆ.

HALFORDIA DRUPIFERA.

F. v. M. Fragm. Phytogr. Austr. v. 43.

Mai-Kussa; Sir W. Macgregor.

Unless the ripe fruit, which is not available yet, should unexpectedly exhibit marked differences, this plant ought not be specifically separated. Referring further to Rutaceæ it might be noted, as here so very readily overlooked, that the genus *Herzogia* (Schumann's *Flora von Kaiser Wilhelm's Land* 60), as mentioned by the author himself, seemingly on suggestions by Warburg, is founded on an abnormal state of *Euodia hortensis*; see Uhlworm's *Bot. Central Blatt* 1889, p. 265. As regards the union of *Melicope* with *Euodia*, to which under *Herzogia* is alluded, that measure has received already in 1873 the support of so experienced a phyto-grapher as Baillon (*Histoire des Plantes, Rutacées* p. 469). Connected with this question it should be considered, that in the neighbouring genus *Boronia* some species occur, as well known, with four sterile stamens; yet they by universal opinion have not been excluded from that genus. The practical advantages of dealing with large genera are much greater, than any disadvantages arising from the union of such, as are founded on but slight differences. This principle is also maintained throughout in Bentham and J. Hooker's great work.

Acradenia was transferred by the writer from the tribe *Boroniaceæ* to that of *Xanthoxyleæ* already 1867 (*Papers of the Royal Society of Tasmania* p. 7-8) after then completed investigation of the carpology of that genus.

A species of *Citrus* occurs as indigenous about 300 miles up the Fly-River according to Mr. Baeuerlen; the size of the fruit was that of a Seville-Orange.

URTICACEÆ.

FICUS HESPERIDIFORMIS.

King in the *Journal of the Asiatic Society of Bengal* lv. 401 (1886).

Eastern New Guinea; II. O. Forbes.

Besides the following species are by the same author described as new in the above quoted publication chiefly from the same collection.

F. Edelfeltii, p. 402; *F. Lawesii*, p. 403; *F. casearoides*, p. 403, for which the name *F. Kingii* may be substituted, as already a *F. casearia* became described; *F. Scratchleyana*, p. 404; *F. Miquelii*, p. 405; *F. Chalmersi*, p. 406; *F. Bernaysii*, p. 406; *F. Pantoniiana*, p. 407; *F. Baenerleni*, p. 408; *F. durinseula*, p. 408; *F. Oduardi*, p. 409; *F. pauper*, p. 110; *F. Soromensis*, p. 111; Dr. King in the same periodical lvi., gave additionally descriptions of the following Papuan new species: *F. conspicabilis*, p. 61; *F. mespiloides*, p. 62; *F. Conora*, p. 62; *F. Arfakensis*, p. 63; *F. Comitisi*, p. 63; *F. grandis*, p. 64; *F. D'Albertisi*, p. 64; these from Dr. Beccari's collection. The *Artocarpus Blumeanus*, recorded by Schumann in his *Flora of Kaiser Wilhelm's Land* p. 39, is now referred by him to *Sarcocephalus*.

POLYGONACEÆ.

MUEHLENBECKIA RHYTICARPA.

F. v. M. Fragm. v. 92.

Wasi-Kussa; Sir W. Macgregor.

All parts of the plant are smaller than usual, and the fruits are rather granular-rough and somewhat shining.

FICOIDEÆ.

SESUVIUM PORTULACASTRUM.

Linné, Syst. Veg. Edit. Decima 1058.

Kapa-Kapa; Sir W. Macgregor.

LEGUMINOSÆ.

PTEROCARPUS PAPUANUS.

F. v. M. in the Austral. Journ. of Pharm. April 1886.

Maiva and Kerepuna; Edelfelt.

DIOCLEA REFLEXA.

J. Hooker, Niger Flora 306.

New Guinea, precise locality not recorded.

Schizosiphon roseus of Schumann (*Flora of Kaiser Wilhelm's Land* p. 101) has changed its name into *Schizoscyphus roseus* (Uhlworm, *Bot. Central Blatt* 1889, p. 205). The genus *Hausemannia* has been reduced to the section *Archidendron* of *Albizzia* (*L. S. of N.S.W. sec. ser. v. 20*).

MYRTACEÆ.

EUCALYPTUS TERETICORNIS.

Smith, Specimen of the Botany of New Holland 41.

Wasi-Kussa; Sir Will. Macgregor.

EUCALYPTUS TERMINALIS.

F. v. M. in the Journal of the Linnean Society iii. 89.

Mai-Kussa; Sir Will. Macgregor.

There the broad-leaved form.

METROSIDEROS PARADOXA.

F. v. M. Fragn. Phytogr. Austral. i. 80.

Mai-Kussa; Sir Will. Macgregor.

Occasionally fruits occur with four cells; the secession of the exocarp is often imperfect.

TRISTANIA SUAVEOLENS.

Smith in Rees' Cyclopaedia xxxvi (1817); var. *adenanthera*.

Leaves large, lanceolar-ovate, much paler beneath and there bearing a slight silk-like vestiture; peduncles as long as the cyme; connate portions of filaments glabrous and comparatively broad; anthers terminated by a conspicuous glandule.

On grassy plains at the Fly-River; W. Bauerlen.

To 60 feet high. Whether this is really a distinct species, designable under the name *adenanthera*, will be shown, when the fruit shall have been collected. Some mention of this plant was made already in the Proc. L. S. of N.S.W., sec. ser. ii. 429.

MELALEUCA SYMPHYOCARPA.

F. v. M. in Transact. of the Vict. Inst. ii. 44.

Mai-Kussa; Sir Will. Macgregor.

LEPTOSPERMUM JAVANICUM.

Blume, Bijdr. 1100; var. *Papua*.

Branchlets very slender, when young beset with soft hairlets leaves of thin texture, short-stalked, narrowly elliptic-lanceolar, soon glabrous, faintly three-venulated lengthwise; flowers in terminal

clusters; tube of the calyx as well as the bracts bearing a silk-like indument; calyx-lobes almost semi-orbicular, nearly glabrous; petals obovate-orbicular, conspicuously longer than the calyx; stamens about twenty-five; anthers globular-ovate; style short; stigma depressed; ovulary beset with minute hairlets.

Mai-Kussa; Sir. W. Macgregor.

This agrees in most of the characteristics, given by Blume, but the flowers are terminal. Fruits of the Papuan plant have as yet not been obtained. The variety-name could become specific, should this plant prove to be a distinct species.

FENZLIA OBTUSA.

Endlicher, *Atacta* 19, t. 17.

Hynes-River; Sir Will. Macgregor.

The aspect is almost that of a *Boronia*. *F. retusa* should probably be considered a mere variety. The genus was under the name *Lithocarpus* first recorded as myrtaceous in the Proc. of the L. S. ii. 185.

EUGENIA BAEUERLENI.

F. v. M. in the Austral. Journ. of Pharm., June 1886.

On the Strickland-River; W. Baeuerlen.

In the above publication notes also on *Cleistocalyx* and *Acicalyptus* were offered.

BEGONIACEÆ.

BEGONIA SHARPEANA.

F. v. M. in Proc. of the L. S. of N.S.W., sec. ser. ii. 420, t. 7 (1887).

Aird-River; Th. Bevan.

ARALIACEÆ.

PANAX FRUTICOSA.

Linné, *sp. pl. edit.* sec. 1513.

Aroa-River; Armit.

Mentioned in the Proc. of the L. S. of N.S.W., sec. ser. ii. 422 (1887).

The Rev. S. Whitmee sent specimens with much dissected leaves from Samoa, where the popular name of the plant is Tani-Tani; he saw it wild in Manua.

VINIFERÆ.

VITIS ADNATA.

Wallich, numer. list. 5998.

On the Strickland-River; W. Baeuerlen.

PROTEACEÆ.

HELICIA FORBESIANA.

F. v. M. in Vict. Naturalist iii. 63 (1886).

Near *Soyera*; H. O. Forbes.

The genus *Cyanocarpus* (Bailey) in Meston's report on the Exped. to Bellenden Ker Range 21 (1889) is best referred as sectional to *Helicia*, inasmuch as the solitary characteristic, on which it rests, the succulence of the pericarp, is one of degree; thus the fresh pericarpal layer is almost dry in some species and more or less moist in others.

LORANTHACEÆ.

NOTHOTHIXOS SUBAUREUS.

Oliver in Journ. of the Linn. Soc. vii. 105.

Base of Owen-Stanley's Ranges; H. O. Forbes.

Mentioned already in the Proc. of the L. S. of N.S.W., sec. ser. ii. 422, as Papuan. Prof. Oliver has described in Hooker's *Icones Plantarum*, third series, 1519, a closely allied species under the name *N. Molayanus*. In examining the structure of the flowers of this genus closely in 1855 from living plants, I became aware, that it did not coincide with *Viscum*, but I was reluctant to publish isolated observations in an order of such structural perplexity, referring the genus preliminarily to *Tupeia*. See *Procced. L. S. ii.* 156 (1857).

RUBIACEÆ.

MUSSAENDA BEVANI.

F. v. M. in the Proc. of the L. S. of N.S.W., sec. ser. ii. 419, t. 6 (1887).

Aird-River; Th. Bevan.

LASIOSTOMA LORANTHIFOLIUM.

Bentham in Hook. Lond. Journ. ii. 224.

New Guinea; Hinds. See also Note by Schumann l.c.

PASSIFLOREÆ.

MODECCA AUSTRALIS.

R. Brown in De Candolle, prodr. iii. 337.

Fly-River; Sir Will. Macgregor.

To this species seems referable *M. populifolia*, Zippel in Blume's *Rumphia* i., 168 t. 50, from Timor, published 1835, therefore seven years after the description of R. Brown's *Carpentaria*-plant had appeared, both localities being not distant from New Guinea. The fruits are delineated by Bauer as almost pear-shaped and the seeds as only half enclosed in the aril; but this is evidently explained by the immaturity of the fruit, available to that distinguished artist. The covering of the seeds described and by fig. 4 illustrated in Blume's work is given as short, but the main picture shows the fully developed seeds quite enveloped in the aril, as indeed they are on specimens from the Fly-River, and as likewise noted and illustrated by Blume for *M. obtusa* and *M. cordifolia*. The coils of the tendrils in Australian specimens are varying from one to seven. The male flowers are pictured also in a young state only, which might account for the extreme shortness of the filaments, and further they are shown as tetramerous; whether this is a really permanent and peculiar characteristic, further research must prove; in all other species the flowers are recorded as pentamerous; so they are found also on this occasion, but in the few, available for dissection here, one had of its five anthers only three well developed; nevertheless the normal occurrence of tetramerous flowers in *Passiflora tetrandra* speaks for the likelihood of the same characteristic occurring within the genus *Modecca* likewise. *M. australis* occurs on the following places as yet unrecorded for it:—King's Sound, Chapman; Collier-Bay, Hughan; Melville-Bay and Liverpool-River, Gulliver; entrance of the Victoria-River, F. v. M.; Mackay- and Herbert-River, Dallachy; Bloomfield-River, Miss Bauer; Endeavour-River, Persich.

This plant climbs sometimes to the upper branches of tall trees. The fruit attains a length of four inches; the pericarp is occasionally two- or four-valved. Seeds very numerous, when mature measuring a $\frac{1}{4}$ – $\frac{1}{3}$ inch; the aril, though succulent, is thin and as a whole detractable; the outer layer or the testa is pale, the inner or endopleura is dark, hard, comparatively thick and intruding undularly somewhat into the albumen.

CUCURBITACEÆ.

ALSOMITRA MUELLERI.

Cogniaux in the Proc. L. S. of N.S.W. ii. 422 (1887).

Southern New Guinea; Baeuerlen.

MELOTHRIA PAPUANA.

Cogniaux inedit.

Southern New Guinea; nearest to *M. Peneyana*.

GOODENIACEÆ.

SCÆVOLA OPPOSITIFOLIA.

Roxburgh, *Flora Indica*, ed. Carey i. 148.

Base of the Owen-Stanley's Ranges; H. O. Forbes.

ERICACEÆ.

RHODODENDRON CARRINGTONIÆ.

F. v. M. in the *Victorian Naturalist* iv. 110 (18).

On mountains at elevations of 6–7,000 feet near Mount Obree; Cuthbertson and Sayer.

In reference to the affinities of this plant it may still be added, that it differs from *R. jasminiflorum* in less copious flowers of about double length, in its ovulary being beset with spreading hairlets and being attenuated at the base, also in much longer style.

CATANTHERA LYSIPETALA.

F. v. M. in *Britten's Journal of Bot.* xxv., Oct. 1886.

Sogore, close to the south of the Owen-Stanley's Ranges; H. O. Forbes.

DIMORPHANTHERA FORBESII.

F. v. M. in *Britten's Journal of Bot.* xxv., Oct. 1886.

Sogore and Mount Worri-Worri, 5,000 feet; H. O. Forbes.

SCROPHULARINÆ.

LIMNOPHILA GRATIOLOIDES.

R. Brown, *prodr.* 442.

Fly-River; Sir Will. Macgregor.

MYRSINACEÆ.

ARDISIA PORANTHERA.

F. v. M. and C. Moore in Transact. R. S. of N.S.W., June 1886.

Described from a plant of N. G., cultivated in the Sydney Botanic Garden.

BIGNONIACEÆ.

TECOMA DENDROPHILA.

Blume, Rumphia iv. 35, t. 190.

Near the base of the Owen-Stanley's Ranges; H. O. Forbes.

IPOMŒA CHRYSSEIDES.

Ker in Bot. Regist. t. 210.

Fly-River; D'Albertis.

Mentioned by me as Papuan in the Proc. of the L. S. of N.S.W., sec. ser. ii. 422 (1887). The pubescent variety of *I. congesta* has been sent from New Britain by Mr. Parkinson.

LABIATÆ.

PLECTRANTHUS LONGICORNIS.

F. v. M. Fragm. v. 51.

Wasi-Kassa; Sir Will. Macgregor.

APOCYNACEÆ.

ALYXIA SPICATA.

R. Brown, prodr. fl. Nov. Holl. 470.

Hynes-River; Sir Will. Macgregor.

The lateral venules of the leaves are on the upper side more or less prominent. The ripe fruit is yellow outside.

This species occurs in Australia westward to Port Darwin.

ALYXIA LAURINA.

Gaudichaud, voy. Freyc. 451, t. 62.

New Guinea; Hinds. Recorded by Bentham in Hooker's London Journ. ii. 226. Also mentioned by Schumann. The genus *Orchipeda*, of which one species was described in vol. ii. 30 of this work, has become superseded by the older *Voacanga*.

LOGANIACEÆ.

MITRASACME ELATA.

R. Brown, prodr. 453.

Mai-Kussa; Sir Will. Maegregor.

A variety with smaller flowers. Fruit not seen.

FRAGRÆA WOODIANA.

F. v. M. in the Austral. Journ. of Pharm. Sept. 1886.

Base of the Owen-Stanley's Ranges; H. O. Forbes.

CONIFERÆ.

ARAUCARIA CUNNINGHAMI.

Aiton in Sweet's Hort. Brit. 475.

On ranges near Mt. Obree from 6,000 feet upwards. There first seen by Mr. C. Hartmann. Notes on this Araucaria as Papuan occur in the Victorian Naturalist of December 1887.

ORCHIDEÆ.

CRYPPIPEDIMUM ROTHSCILDIANUM.

Sander in the Gardener's Chronicle 1888, p. 457 and 554. J. Hooker, Bot. Magazine 7102.

Introduced from New Guinea into England as a hot-house plant. Probably other species of this extensive genus will be found yet in New Guinea, where it seems to reach its southern boundary, as hitherto we have searched for it vainly in Australia, even in the jungle-country of Northern Queensland.

ERIA KINGII.

F. v. M. in the Southern Science Record ii. 71.

Mentioned already as also Papuan in the Proc. of the L. S. of N.S.W., see. ser. ii. 422 (1887).

DENDROBIUM ARACHNOSTACHYUM.

G. Reichenbach in the Gard. Chron. 1877, p. 334.

Cultivated in British hot-houses from New Guinea. Allied to D. Mirbelianum. Notes on D. spectabile from a living cultivated plant occur in the Victorian Naturalist June 1884.

DENDROBIUM WILLIAMSIANUM.

G. Reichenbach in Gardener's Chronicle 1885, p. 173, fig. 32.

S.E. New Guinea; Goldie.

DENDROBIUM CUTHBERTSONI.

F. v. M. in the Transact. of the R. S. of Vict. 1887, p. 7-8.

At elevations between 6,000 and 7,000 feet near Mt. Obree; Cuthbertson and Sayer.

Allied to *D. puniceum* and *D. cerasinum*.

DENDROBIUM RUTRIFERUM.

G. Reichenbach in the Gardener's Chronicle 1887, p. 746.

Cultivated as Papuan at Brussels. It belongs to the section *Pedilonum*, near *D. pleiostachyum*.

DENDROBIUM NYCTERIGLOSSUM.

G. Reichenbach in the Gardener's Chronicle 1886, p. 616.

New Guinea. Cultivated in Belgium.

Allied to *D. sinuatum* and *D. serra*.

SARCOCHILUS PLATYPHYLLUS.

Thrixspermum platyphyllum; G. Reichenbach in Uhlworm's Bot. Central-Blatt xxviii. 343 (1886).

North-Western New Guinea; Beccari.

Near *S. indusiatus*.

SARCOCHILUS BECCARII.

Thrixspermum Beccarii; G. Reichenbach in Uhlworm's Bot. Central-Blatt xxviii. 343 (1886).

N.W. New Guinea; Beccari.

Flowers resembling those of *Sarcanthus teretifolius*.

ARACHNIS BECCARII.

G. Reichenbach in Uhlw. Bot. Central-Blatt xxviii. 343 (1886).

N.W. New Guinea; Beccari.

Flowers similar to those of *Vanda Roxburghii*.

CLÆSOSTOMA FIRMULUM.

G. Reichenbach in Uhlw. Bot. Central-Blatt xxviii. 344 (1886).

N.W. New Guinea; Beccari.

Near C. subviolaceum.

SARCANTHUS PRÆALTUS.

G. Reichenbach in Uhlw. Bot. Central-Blatt xxviii. 344.

N.W. New Guinea; Beccari.

Near S. Nagarensis.

LUISIA BECCARII.

G. Reichenbach in Uhlw. Bot. Central-Blatt xxviii. 344.

N.W. New Guinea; Beccari.

Near L. retusa.

CÆLOGYNE BECCARII.

G. Reichenbach in Uhlw. Bot. Central-Blatt xxviii. 344.

N.W. New Guinea; Beccari.

Allied to C. psittacina.

MICROSTYLIS PEDICELLARIS.

G. Reichenbach in Uhlw. Bot. Central-Blatt xxviii. 345.

N.W. New Guinea; Beccari.

Allied to M. Rheedei.

APHYLLORCHIS ODOARDI.

G. Reichenbach in Uhlw. Bot. Central-Blatt xxviii. 345.

N.W. New Guinea; Beccari.

The smallest of all.

VRYDAZYGNEA PAPUANA.

G. Reichenbach in Uhlw. Bot. Central-Blatt xxviii. 345.

N.W. New Guinea.

HÆMODORACEÆ.

HÆMODORUM COCCINEUM.

R. Brown, prodr. 300.

Mai-Kussa.

PANDANACEÆ.

PANDANUS MACGREGORII.

F. v. M. and Solms-Laubach in der Bot. Zeitung xxxvii. 511 (1889).
In the Louisiades, on Ferguson-Island; Sir W. Macgregor.
Allied to *P. Ceramicus* and *P. butyrophorus*.

PANDANUS STENOCARPUS.

Solms-Laubach in Annal. du jard. bot. de Buitenzorg ii.
Mt. Arfak, 5- 7,000; Beccari.

PANDANUS PAPUANUS.

Solms-Laubach in Annal. de Buitenzorg ii.
Aru-Islands; Beccari.

PANDANUS SUBUMBELLATUS.

Solms-Laubach in Annal. de Buitenzorg ii.
Aru-Islands; Beccari.

PANDANUS BECCARII.

Solms-Laubach in Annal. de Buitenzorg ii.
Aru-Islands; Beccari.

FREYCINETIA BECCARII.

Solms-Laubach in Annal. de Buitenzorg ii.
Andai; Beccari.

The descriptions of these are reiterated in Just's Bot. Jahres
Berichte xi. 613, 614.

PALMÆ.

CALAMUS CUTHBERTSONI.

Beccari in Giornale Botanico Italiano xx. 179, 180.
At elevations of nearly 8,000 feet near Mt. Obree; Cuthbertson
and Sayer.
This species belongs to the section *Coleospathæ*.

PTYCHOSPERMA SAYERI.

Beccari in Giornale Botanico Italiano xx. 178.

At elevations of about 2,000 feet near Mt. Obree; W. A. Sayer.

PTYCHANDRA OBREENSIS.

Beccari in Giornale Botanico Italiano xx. 178.

On high ranges near Mt. Obree; Sayer.

PTYCHANDRA MUELLERIANA.

Beccari in Giornale Botanico Italiano xx. 177.

At elevations of about 7,000 feet near Mt. Obree; W. A. Sayer.

CYPERACEÆ.

CYPERUS DIGITATUS.

Roxburgh, fl. Ind. ed. Carey i. 209.

Fly- and Strickland-Rivers; Baeuerlen. There to 10 feet high.

Mentioned already in the Proc. of the L. S. of N.S.W., sec. ser. ii. 422 (1887).

GAHNIA ASPERA.

Sprengel, syst. veg. ii. 114.

Mai-Kussa; Sir Will. Macgregor.

The advisability of uniting the genera *Cladium* and *Gahnia* can hardly be questioned; but as a specific appellation occurs first within *Gahnia*, it is rendered necessary to suppress *Cladium*, although that genus was the earliest defined of the two. On the principles, by which they were kept separate, also within the same order the genus *Carex* could be disintegrated.

SCHOENUS CALOSTACHYUS.

Poiret, Encycl. Méth. Suppl. ii. 251.

Sudest-Island, Lousiades; Sir Will. Macgregor.

This plant has been identified by Mr. C. B. Clarke, the present monographer of Cyperaceæ, who further states, that it is identical with *Cyclocampe Waigionensis*, Steudel.

GRAMINEÆ.

ERACHNE SQUARROSA.

R. Brown, prodr. fl. Nov. Holl. 183.

Mai-Kussa; Sir Will. Macgregor.


ERACHNE PALLESCENS.

R. Brown, prodr. fl. Nov. Holl. 184.

Mai-Kussa; Sir Will. Macgregor.

The closely allied *E. ciliata* is more beset with hairlets, and the outer bracts are less prominently streaked.

A host of ferns and other acotyledonous plants have within the last few years become additionally known from New Guinea, but to them will be referred in this work at some future occasion.



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